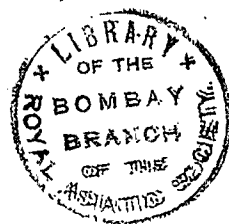


ADMINISTRATION REPORTS
OF THE
FOREST DEPARTMENT

IN THE
BOMBAY PRESIDENCY,

INCLUDING

SIND

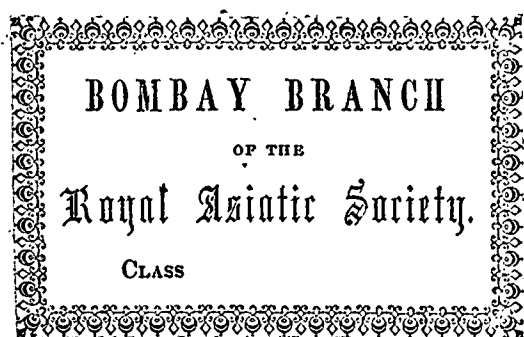


FOR THE YEAR 1886-87.

Bombay:
PRINTED AT THE GOVERNMENT CENTRAL PRESS.

1888.

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OF THE

FOREST DEPARTMENT

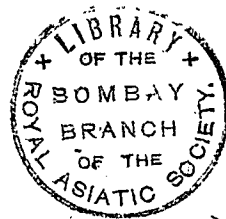
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NORTHERN CIRCLE.

No. 3972 OF 1887-88.

FROM

A. T. SHUTTLEWORTH, ESQUIRE,
CONSERVATOR OF FORESTS, N. C. ;

TO

T. D. MACKENZIE, ESQUIRE,
CHIEF SECRETARY TO GOVERNMENT,
REVENUE DEPARTMENT,
Bombay.

Poona, 25th October 1887.

SIR,

I have the honour to submit herewith the Forest Administration Report of the Northern Circle for the year 1886-87, with its subsidiary statements.

I have the honour to be,

Sir,

Your most obedient Servant,

A. T. SHUTTLEWORTH,
Conservator of Forests, N. C.

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FOREST ADMINISTRATION REPORT, NORTHERN CIRCLE.

1886-87.

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FOREST ADMINISTRATION REPORT

OF THE

NORTHERN CIRCLE, BOMBAY PRESIDENCY,

FOR THE OFFICIAL YEAR 1886-87.

INTRODUCTION.

1. The selection of lands for forest reservation, and the enquiry into, determination, and settlement of notified forest lands, in the matter of rights affecting them, has been continued during the year by Forest Demarcation and Settlement Officers specially employed for these purposes; 11 such special officers have been on deputation in the several divisions of the Northern Circle during the year; and in some cases these works have been carried out by local revenue officers in addition to their own revenue and other duties. The changes which have affected the forest areas exhibit the following results :—

	Reserved Forest.	Protected Forest.	Total.
	Sq.m. a.	Sq.m. a.	Sq.m. a.
At commencement of the year	7,016 367	1,013 102	8,029 469
At close of the year	7,231 104	1,080 301	8,311 405
Increase	214 377	67 199	281 576

2. The settlement of the greater portion of the reserves, which were provisionally notified before the commencement of the year, has been completed.

3. A very considerable length of forest boundaries has been defined upon the ground in the several divisions; 18,383 special forest boundary-marks having been constructed during the year at a cost of Rs. 6,713-10-0.

4. The Working-Plans Division has done much work in the Thána Collectorate, determining and defining the boundaries of the sanctioned "Reserved Forests," differentiating all the forest reservations, and locating and marking out upon the ground the several coupes for the year 1887-88, and estimating their contents and value.

5. The survey of the forests of the Thána Collectorate on the scale of 8 inches to the mile was commenced by a Topographical Survey Party belonging to the Government of India's Survey, and 52½ square miles were surveyed during the season.

6. There has been no change in the composition of the divisions comprising the Northern Circle; a few villages with some forest have been transferred from the Ahmednagar to the Poona Division.

7. The names of superior forest officers, who have been conducting the administration of the forests during the year of this report, with the stations they occupied, are given below.

NORTHERN CIRCLE.

Mr. A. T. Shuttleworth, Conservator of Forests, 1st Grade, throughout the year.

No.	Forest Divisions.	Name of Officer.	Rank.	Designation.	From	To	Remarks.
1	North Thána	Mr. A. D. Wilkins " G. F. R. Blackwell " L. B. Oke " N. B. Oke " Mr. S. Hornidge	Deputy Conservator, 4th Grade Sub-Assistant Conservator, 3rd Grade. Acting do. Sub-Assistant Conservator, 1st Grade. Assistant Conservator, 1st Grade	Divisional Forest Officer Assistant do. Do. Do. Divisional Forest Officer	1st April 1886 Do. Do. 29th June 1886 1st April 1886	31st March 1887. Do. 1886. 28th June 1886. 31st March 1887. Do.	
2	South Thána	" R. H. Madan...	Acting do. 3rd Grade	Assistant do.	Do.	31st August 1886. 31st March 1887.	
3	East Khándesh	" G. K. Shahane " Mr. C. Greatheed " Mr. H. Mainwaring " W. G. Clabby	Sub-Assistant do. 2nd Grade Deputy Conservator, 4th Grade Do. 3rd Grade Acting Assistant Conservator, 3rd Grade.	Do. Divisional Forest Officer Do. Do.	1st April 1886 Do. Do. 24th May 1886	Do. Do. 1886. 23rd May 1886. 30th March 1887.	
4	West Khándesh	" G. L. Gibson " L. D. Joshi " Mr. W. G. Betham " R. H. Madan...	Deputy Conservator, 2nd Grade Sub-Assistant Conservator, 2nd Grade. Deputy Conservator, 3rd Grade Acting Assistant Conservator, 3rd Grade.	Do. Assistant do. Divisional Forest Officer Do.	31st March 1887 1st April 1886 Do. 5th October 1886.	31st March 1887. Do. 4th October 1886. 5th November 1886.	
5	Násik	" W. G. Betham " L. B. Oke	Deputy Conservator, 3rd Grade Acting Sub-Assistant Conservator, 3rd Grade.	Do. Assistant do.	6th November 1886 29th June 1886	31st March 1887. 16th November 1886.	
6	Ahmednagar	" W. A. Wallinger " Mr. R. S. F. Fagan " H. Mainwaring " Mr. O. Wroughton	Sub do. Deputy Conservator, 4th Grade Do. 3rd Grade Do. 2nd Grade	Do. Divisional Forest Officer Do. Do.	17th November 1886 1st April 1886 24th May 1886 1st April 1886	31st March 1887. 23rd May 1886. 31st March 1887. Do.	
7	Poona	" W. R. Gaunde " Mr. G. K. Betham " G. S. Hinge	Sub-Assistant Conservator, 3rd Grade. Deputy Conservator, 3rd Grade Acting Sub-Assistant Conservator, 3rd Grade.	Assistant do. Divisional Forest Officer Assistant do.	Do. Do. Do.	Do. Do. 30th June 1886.	
8	Satára	" G. R. Mahajan	Sub-Assistant Conservator, 2nd Grade.	Do.	1st July 1886	9th March 1887.	
9	Sholápur	" Mr. G. P. Millet	Assistant Conservator, 1st Grade	Divisional Forest Officer	1st April 1886	31st March 1887.	
10	Surat	" Mr. F. Gleadow " Mr. H. W. Keys " R. H. Madan...	Deputy Conservator, 4th Grade Assistant Conservator, 1st Grade Acting Assistant Conservator, 3rd Grade.	Do. Do. Do.	Do. Do. 2nd September 1886...	Do. 1st September 1886. 3rd October 1886.	
11	Panch Maháls	" H. W. Keys " Mr. T. B. Fry	Assistant Conservator, 1st Grade Deputy Conservator, 3rd Grade	Do. Do.	4th October 1886 1st April 1886	31st March 1887. Do.	
12	Working Plans						

8. The subordinate protective and office establishments have continued of the same numerical strength as they were at the close of last year. There were then 57 cases of forest offences to be tried and disposed of; 839 new cases appeared upon the registers during the year; 811 cases affecting 1,928 individuals were tried; convictions obtained in 533 cases concerning 1,250 individuals; and acquittals in 278 cases affecting 673 individuals; and 85 cases remained over at the end of the year.

9. 154 cases of forest offences committed in "Protected Forests" and in proposed "Reserved Forests," provisionally notified under Section 4 of the Forest Act, were disposed of by Assistant Collectors, under Section 43 of the Land Revenue Code, in the Thána Division. Divisional Forest Officers have exercised with freedom and judgment their powers of compounding offences under Section 67 of the Forest Act, and 4,305 cases of compounding have occurred.

10. Fire-conservancy maintained by the vigilance of forest guards and the good-will and co-operation of the population of forest villages has been successful, although the area traversed by fire is larger in some divisions this year than last. In the Thána divisions the improvement in this respect is marked.

11. The financial results of the year have not been so satisfactory as could be wished. The revenue has declined from Rs. 10,37,296 of the previous year to Rs. 9,13,100.

CHAPTER I.

AREA AND BOUNDARIES.

1.—AREA AND BOUNDARIES.

12. The selection of forest land or waste land, the property of Government, or over which the Government has proprietary rights, or to the whole or any part of the forest produce of which Government is entitled, in order that such lands might be constituted either "Reserved Forests" or "Protected Forests" according to their circumstances and surrounding conditions, has been continued during the year by a number of special officers, designated "Demarcation and Settlement Officers", appointed by Government for this duty. The changes which have affected the forest areas appear in the following table:—

No.	Division.	AREA ON 1ST APRIL 1886.				ADDED DURING THE YEAR.				DISFORESTED OR EXCLUDED BY RECTIFICATION OF AREAS.				AREA ON THE 31st MARCH 1887.			
		Reserved.		Protected.		Reserved.		Protected.		Reserved.		Protected.		Reserved.		Protected.	
		Square Miles.		Square Miles.		Square Miles.		Square Miles.		Square Miles.		Square Miles.		Square Miles.		Square Miles.	
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1	North Thána ..	263	331	300	621	21	209	..	..	..	4	2	252	284	536	298	369
2	South Thána ..	282	1	353	80	43	565	..	..	..	171	..	30	325	395	353	50
3	East Khândesh ..	668	76	153	514	..	..	..	..	..	..	49	207	668	76	104	307
4	West Khândesh ..	1,216	493	194	617	..	348	..	..	1	108	..	..	1,216	93	184	617
5	Nâsik ..	1,083	195	..	..	29	24	..	..	1	310	..	..	1,110	549	..	..
6	Ahmednagar ..	805	88	10	173	54	299	1	58	23	134	..	117	836	253	11	114
7	Poona ..	711	19	..	..	14	94	..	..	3	92	..	..	722	21	..	..
8	Sâtâra ..	641	316	..	17	19	484	..	..	1	400	..	..	659	400	..	17
9	Sholâpur ..	167	306	..	..	66	301	..	..	1	20	..	..	232	587	..	..
10	Surat ..	969	124	..	..	..	..	..	..	..	..	..	..	969	124	..	..
11	Panch Mahâls ..	208	333	..	..	1	261	118	107	4	329	..	..	295	270	118	107
Total ..		7,016	367	1,013	102	251	25	119	165	36	288	51	606	7,231	104	1,080	301

13. Of the area reduced during the course of the year from "Reserved Forests" which at the commencement amounted to 7,016 square miles 367 acres, 17 square miles 520 acres were disforested by notification issued under Section 26 of the Forest Act, and the balance, 18 square miles 408 acres, represents rectifications of errors either discovered in the forest registers or in the figures of the old survey by the revision survey when its operations have been completed. In the same way, of the reductions in the "Protected Forests", 50 square miles 203 acres are due to absolute exclusions of lands from protected conservation, some of the lands have been converted into Reserved Forest, and 1 square mile 403 acres to corrections of mistakes in figures. Of the areas added during the

year, rectification is responsible for 15 square miles 194 acres of "Reserved", while by notifications under Sections 19 and 28 respectively 235 square miles 471 acres have been freshly constituted "Reserved Forests" and 119 square miles 165 acres "Protected Forests."

14. The proportion of the forests finally constituted to the whole area of each Collectorate and the progress made in "Forest Demarcation," which means the selection of areas for forest reservation, is as under :—

No.	Collectorate.	Territorial Area in Square Miles.	Reserved Forests duly constituted in Square Miles.	Percentage of Forest.	Number of Tálukas or Revenue Sub-Divisions.	Number of Tálukas in which Demarcation has been undertaken and sanctioned.	Number of tálukas in which Demarcation remains to be completed.	Number of undemarcated Tálukas.
1	Thána ...	4,243	610	14·3	10	4	1	5
2	Khándesh ...	9,944	1,884	18·9	16	8	3	5
3	Násik ...	5,940	1,111	18·7	12	9	2	1
4	Ahmednagar ...	6,666	836	12·5	11	7	4	...
5	Poona ...	5,348	722	13·5	8	4	4	...
6	Sátára ...	4,988	660	13·2	11	6	5	...
7	Sholápur ...	4,521	233	5·1	7	6	1	...
8	Surat ...	1,662	969	58·3	8	1	3	4
9	Panch Maháls ...	1,613	206	12·7	3	2	1	...
		44,925	7,231	16·09	86	47	24	15

15. In the tálukas where the demarcation has been undertaken and sanctioned by Government there still remain lands to be acquired in order to complete the approved demarcation schemes; these lands are held for cultivation and other purposes by survey occupants, but negotiations are being carried on for their obtainment by giving other available waste lands in exchange for them, or by payment of compensation for surrender of the rights of occupancy. During the year of the report, 5,432 acres were obtained on payment, and Rs. 17,086 were expended for the purpose.

16. Of waste and forest lands selected for reservation, and of the lands which have been acquired by exchange or by purchase during the year, considerable areas, which had been provisionally declared as proposed for forests by notifications under Sections 4 and 28 of the Forest Act, were still undergoing settlement inquiries at the close of the year, and had not been finally constituted "Reserved" and "Protected Forest." The following table gives a distribution of these unsettled forest lands :—

No.	Collectorate.	PROVISIONALLY NOTIFIED.						Remarks.
		Of Reserved Forests under Section 4.		Of Protected Forests under Section 28.		Total.		
		S. Miles.	Acres.	S. Miles	Acres.	S. Miles	Acres.	
1	Thána ...	2	227	...	...	2	227	
2	Khándesh ...	307	274	...	...	307	274	
3	Násik ...	1	323	...	...	1	323	
4	Ahmednagar ...	6	432	1	58	7	490	
5	Poona ...	22	326	...	...	22	326	
6	Sátara ...	...	581	...	...	...	581	
7	Sholápur ...	43	513	...	...	43	513	
8	Surat ...	...	...	...	...	...	...	
9	Panch Maháls ...	15	110	118	107	125	217	
		400	226	119	165	519	391	

17. Whether the sanctioned demarcation schemes of the several *tálukás* provide sufficiently for the storage of the rainfall in the country—

- (a) for the maintenance of a water-supply in springs, rivers, tanks and for the natural irrigation of the lands upon the lower levels of the country, which being occupied for purposes of cultivation ought to be commanded by forests located up on the higher levels, which would then serve as natural reservoirs ;
- (b) for the safety of roads, bridges, railways and other lines of communications, as well as of cultivation in the champaign against destructive floods ;
- (c) for the preservation of the beds and channels of rivers and streams of tidal and navigable creeks and estuaries, the beds of lakes, artificial reservoirs, tanks, the foreshores and beds of harbours and bays, against the deposit and accumulation of silt :
- (d) for the retention of the soil upon ridges and slopes and in the valleys of hilly tracts ;
- (e) for the prevention of the formation of torrents and ravines ;

is by no means certain. The selection of forest areas, although made with care by the very able and intelligent Assistant Collectors who have been specially employed upon this work, and have performed it laboriously and conscientiously, has been restricted by circumstances beyond their control, such as hill slopes being in possession of private individuals for cultivation or other uses than of forest conservancy, and the admitted demand for land either for purpose of cultivation or for purposes of grazing for sheep, goats and other cattle. The drainage basin of Bombay harbour is to be found in the Thána and Kolába Collectorates, and it may be taken roughly at 1,500 square miles. The rainfall over this basin averages at least 100 inches in the twelve months ; the greater portion of this rain, however, falls within a brief period of a few weeks. It would require a water tower of great dimensions having its four sides one mile long each way, and of the height of $2\frac{1}{2}$ miles to hold this enormous volume of water. The erosive power of such a heavy concentrated rainfall precipitated from a great height must necessarily be of giant force. If then the steep slopes within the catchment whereupon this water is poured are not completely protected by superior vegetation to break the force of the falling rain and to let it down gently on to the ground, to retain the greater portion of it, and to bind the surface soil to the sides of the hills, the removal of earth from off their surfaces with its eventual deposition upon the lowest level, in this case in the harbour of Bombay, is the certain effect of a present cause. One inch depth of soil taken off an acre of surface represents 3,600 cubic feet of earth, and one inch off 1,500 square miles of surface no less than 3,45,60,00,000 cubic feet ; fortunately of the catchment basin made up very largely of hill and mountain slopes, a large proportion is still covered with trees, being included within "Reserved Forests". Considerable tracts, however, of it being steep sloping ground are not within reservation, are under no protection whatever, and are exposed fully to the motivé power of the rainfall, and the result may possibly be read in a letter which Mr. Russell Aitken, some time Engineer to the Port Trust of Bombay, addressed to "The Times" newspaper of London last year, where the following sentence appears : "There was deep water in Bombay Harbour only where there was a rapid current to keep the channel open." It has also been reported that large sums of money have been expended in the past few years in dredging silt out of the docks and harbour of Bombay. With the ever present examples of the silted up condition of the tidal channels of inland navigation of the Ratnágiri Collectorate, owing to the destruction of the forests upon their catchments, and of the Gulf of Cambay with the estuary of the Tápti River, the importance of extending forest reservation downwards to at least the base contour line of all the hilly lands, and of maintaining in the highest state of efficiency a complete covering of forest upon the slopes within the drainage basin of Bombay harbour, may not possibly be denied. The cost of obtaining occupied hill lands within the catchment basin would not probably exceed the amount spent during three or four years in dredging the harbour and the docks of Bombay.

18. In the Deccan, the country above and east of the Western Gháts, forest protection is very partial and defective ; and the demarcation schemes are not capable, at present, of affording protection against floods. In the month of December last a rainfall lasting 12 hours over the country of the head waters system of the Sina River created a flood which interrupted traffic between the city of Ahmednagar and the railway line 4 miles off, washed away cattle, farm implements and crops, and did serious damage to house and other property. The storage of the rainfall of the Deccan in place of its immediate return to the sea in the interests of agriculture, and as an insurance against famine, is one of the strongest arguments for the expansion of forest reservation so as to include all water-sheds, sources of streams and rivers, mountains and hills, and such other portions of the country as are adapted by nature to remain covered with forests, and which cannot, at the best, if brought under cultivation, produce more than two or three meagre crops, and then become desolate wastes.

19. At the commencement of the official year, Messrs. Lawrence and Atkins, of the Civil Service, were engaged in forest demarcation and settlement in the Thána Collectorate ; on the 9th April the former proceeded on leave and eventually to England, while the latter on the 19th July relinquished charge of his own and of Mr. Lawrence's office, which he had taken over, in order to join his new appointment of Under Secretary to Government in the Revenue Department. From the 19th July to the 13th September 1886 the District Deputy Collector was in charge of the demarcation and settlement offices, and was relieved on the 14th September by Mr. W. S. Owen, Assistant Superintendent Revenue Survey Department, who was appointed Forest Settlement and Demarcation Officer of Thána, and who continued in office throughout the remainder of the year. Orders of Government have been passed

- (a) in their Resolution No. 7001, dated 2nd October 1886, on the supplementary report upon the forest settlement and demarcation of the Mokháda Peta ;
- (b) in their Resolution No. 8900, dated 20th December 1886, on the supplementary reports of the Kalyán Táluka ;
- (c) in their Resolution No. 7022, dated 4th October 1886, on the allotment of the hill lands in the Karjat Táluka for varkas cultivation.

20. Demarcation schemes for the Sháhápúr and Murbád tálukás within the catchment basin of Bombay harbour, prepared and submitted by Mr. Atkins, C.S., were met with considerable objections on the part of all the forest officers consulted, on account of the proposed exclusion of hill slopes containing valuable teak and other timber, the property of Government, and the insufficiency of the projects for protecting all the drainage slopes in the two tálukás. No orders of Government have been passed upon these proposals.

21. Mr. Owen has completed the settlement inquiries in the Bassein, Bhiwndi, Kalyán, and Sálsette tálukás, which remained to be done ; has acquired by purchase, for Rs. 267-15-6, 4 acres and $2\frac{3}{4}$ gunthás of occupied lands inside the forests ; has commuted the right of certain Thákurs to live in a hamlet inside the Shirgaon forest of the Kalyán Táluka by giving them another site in another village outside of forest limits with timber for building new houses ; has demarcated the forests of Sakwar and Bhatane in the Bassein Táluka ; has inquired into and arranged for the location of cultivation areas and hamlets for Thákurs upon the slopes of the Mátherán hill range and other hills within the Karjat Táluka ; has prepared and submitted to Government a list of forest and waste lands to be included in the forest demarcation scheme of the Váda Táluka—this list has been notified subsequently under Section 4 of the Forest Act ; and has prepared and supplied the local Revenue officers with complete forest registers of the Sálsette, Bhiwndi, and Kalyán tálukás. Thus it will be seen that Mr. Owen has been very actively and industriously employed.

22. In the Collectorate of Khándesh, Mr. Lamb, C.S., was still Forest Settlement and Demarcation Officer at the opening of the year : on the 12th July he proceeded on privilege leave, and returned on the 7th September 1886, the acting Collector of the district holding charge of his office during his absence ;

on the 24th February 1887 Mr. Lamb finally relinquished charge, on transference to Burmah, to Mr. E. Morrieson, C.S., who directed the forest settlement and demarcation work in addition to the revenue and magisterial duties of his own appointment as Assistant Collector up to the end of the year. Mr. Lamb prepared and submitted proposals regarding the location of the Bhil settlements and the demarcation upon the ground of the outer boundary line of the Fatepur-Amoda Reserved Forest in the Sháháda Táluka, which were approved and sanctioned by Government. He submitted demarcation schemes of the Amalner, Erandol, Jalgaon, Páchora, and Jámner tálukás : in respect of the three first-named, final orders of Government were passed in Resolutions Nos. 7105 of the 6th, 7533 and 7534 of the 25th October 1886 ; the Páchora scheme was returned for revision, but no orders had been issued regarding Jámner before the end of the year ; he selected lands upon the banks of rivers in the Bhusával Táluka for being converted into plantations for the protection of the banks, and at the same time to form fuel and fodder reserves such as are the valuable bábul reserves in other portions of the Deccan, in accordance with orders of Government conveyed in Resolution No. 7592 of 1885, but Government in their Resolution No. 3059 of 17th May 1887 have directed that the Commissioner should set apart the selected reserves under Section 38 of the Land Revenue Code if arrangement can be made for their protection in the Revenue Department, otherwise they should be left alone, as it would not be possible to increase forest establishment for their protection ; he completed the settlement of the sanctioned Jalgaon Táluka demarcation scheme ; and he commenced and had made considerable progress in the demarcation of the Bhil settlements inside the Taloda Reserved Forest, and the determination of the outer boundaries of this reserve, when his exceedingly useful career as a Demarcation and Settlement Officer was cut short by his transfer to Burmah. Mr. Lamb applied himself to demarcation and settlement of the Khándesh forests with great vigour, ability and interest, and it is much to be regretted that circumstances have prevented the work being brought to a successful termination by him, as his knowledge of the country, of the people, and of the requirements of forest conservancy gave special value to his service as a Forest Demarcation Officer. Up to the end of the year the out-door work had been finished, final sanction having been accorded, in 9 tálukás, *viz.*, Sávida, Chopda, Shirpur, Jalgaon, Erandol, Amalner, and Sháháda. Schemes had been submitted for two more, *viz.* Páchora and Jámner, and the scheme for Bhusával was approaching completion, leaving the six tálukás of Taloda, Nandurbár, Pimpalner, Chálisgaon, Dhulia, and Sindkheda to be attended to.

23. Mr. Frost, C.S., Special Officer for Demarcation and Settlement in the Násik Collectorate, was employed at the opening of the year in the Baragaon Dángs, below the Western Gháts, in selecting forest areas, with the result that 16,436 acres were demarcated, and the proposals in respect of them were submitted to Government in August 1886, but final orders had not issued before the 31st March 1887. Grazing schemes have been prepared by Mr. Frost for the Kalvan, Násik, Báglán, Sinnar, Niphád, and Dindori tálukás ; these schemes show the particular lands with their acreage of the forests of every village in the táluka which the Forest Settlement Officer considers should be opened to, and closed against, the free pasturage of all village cattle. The forest settlement and demarcation of the Násik, Báglán, and Sinnar tálukás were likewise revised and completed by Mr. Frost during the year, and the revision of the same work was commenced in the Dindori Táluka. Mr. Evelyn Gray, C.S., who was also on special deputation in the Násik Collectorate for determining and constituting forest reservations, completed during the year the demarcation scheme of the Peint Táluka below the Western Gháts, and then rejoined his revenue office in the Thána Collectorate. The only work remaining to be done in the Násik Collectorate, at the close of the year, was the completion of the revision of the demarcation and settlement of the Dindori Táluka and of the Igatpuri Táluka —the former partially done, and the latter not yet commenced. 648½ acres of occupied lands with the forest boundaries in the Peint and Dindori tálukás were purchased for Rs. 660-15-0. Several errors aggregating 1,379 acres, discovered in the figures given last year of the forests of the Násik Division, have been rectified now. Both Mr. Frost and Mr. Gray have performed excellent work of a lasting character in the Násik Collectorate.

24. The Ahmednagar Collectorate has enjoyed the continued services of Mr. A. F. Woodburn, C.S., as Special Forest Demarcation and Settlement Officer. Reports have been submitted containing projects of reservations respecting all the talukás, but the final orders of Government have to be issued regarding the Sangamner, Akola, Kopargaon, and Nevása talukas. Some of these schemes were returned for reconsideration, Government being of opinion that Mr. Woodburn's proposals for the Sangamner and Nevása talukas included in forest reservation more lands than it was desirable to alienate for the purpose. 1,249 acres of lands inside the demarcation schemes of the whole district have been acquired during the year by payment of compensation amounting to Rs. 4,599-2-10, and 233½ acres have also been acquired by exchanges. Rectification of mistakes discovered in the figures of forest registers, and the transfer of some forest lands to the adjoining Collectorate of Poona, have affected the forest acreage returns. Mr. Woodburn has successfully completed the forest selections and forest settlements of this large Collectorate with patience, great industry, tact and management, and has thereby performed work of the highest value to the State in re-organizing the natural reservoirs of the country, and establishing them free from the burden of all and any private rights, save of the right of way. That the demarcation schemes are sufficiently extensive, will possibly be disputed by forest officers, but local circumstances will not permit larger reservations at present.

25. The demarcation work of the Poona Collectorate has been practically completed; the only portion that remains to be demarcated is the forest block round the celebrated hill-fort of Singhar, near Poona, and the orders of Government upon the demarcation scheme of the Haveli Taluka remain to be issued, the report was returned to the Demarcation Officer for reconstruction and re-submission. The office of forest demarcation and settlement officer has been held by the following gentlemen during the year :—

Mr. P. C. Snow, C.S.	In charge of whole district	... From 1st April to 26th April 1887.
	In charge of western division	... From 29th July to 3rd November 1886.
	For the whole district	... From 4th November 1886 to 16th March 1887.
Mr. E. C. Morrieson, C.S.	In charge of whole district	... From 27th April to 28th July 1886.
	In charge of the eastern division	... From 29th July to 3rd November 1886.
Mr. W. P. Symonds, C.S.	In charge of the whole division	... From 17th March to end of year.

Owing to the transfer of certain villages of the Páner Taluka of the Ahmednagar Collectorate to the Sirúr Taluka of Poona, 1,708 acres 38 gunthás of Reserved Forest have likewise been transferred from the former to the latter, 2,054 acres 27½ gunthás of occupied lands inside the demarcation schemes have been purchased for Rs. 6,045 from time to time during the course of the year.

26. Several officers have been in charge of the Forest Demarcation and Settlement Office of the Sátára Collectorate at different times of year of this report, as under :—

Mr. B. G. Sáthé, Deputy Collector—From 1st April to 13th June 1886.

Mr. H. R. Cooke, C.S., Assistant Collector—From 14th June to 1st August 1886.

Mr. Rajaram Khanderao Vaidya, Deputy Collector—From 2nd August 1886 to 31st March 1887.

But the demarcation of all the forest lands had been practically completed the year before last by Mr. Muir-Mackenzie, C.S. Settlement inquiries respecting the forests of 40 villages have been completed by Mr. Rajaram Khanderao Vaidya during the year. The orders of Government upon the settlement and demarcation reports of the five talukás of Tásgaon, Khánápur, Khatáv, Pátan, and Válva remain to be issued; the reports of the two first-named are with Government, the Khatáv and Pátan projects are with the Commissioner, and the

report of Válva has not yet left the Divisional Forest Office of Sátára. Forest registers of all forest lands finally constituted and sanctioned have been written up. Rs. 1,326-6-10 have been paid in compensation for land and rights, 426 acres 36 gunthás having been acquired. Two cases of compensation in the Wái Táluka under the Land Acquisition Act were appealed against to the higher Court, and were decided by the District Judge: in one case the decision of the Forest Settlement Officer being upheld, and in the other larger amounts being awarded than had been assessed in the first instance. The names of Messrs. Spence, Shewan, and Muir-Mackenzie, all of the Civil Service, will ever be associated with the demarcations of the Sátára forests, where the treatment of two important questions affect the value of their work, *viz.*

- (1). Kumri cultivation upon the Ghátmátha, *i. e.* cultivation by the axe and fire of inferior grains upon the ashes of destroyed forests at the crest of the Western Gháts, where the head-waters system of all the rivers are located.
- (2). The cutting of thorns by villagers upon the denuded hills included in the reserves in the eastern portion of the district, where reboisement is the chief work of forest conservancy, and the presence of thorny scrub is of vital importance to its success, in order to bind the little soil that remains to the hill slopes, to create new soil, to provide cover and shade, to nurse seedlings, and to break the dropping force of the rain, and to check its surface off flow.

27. Mr. Silcock, C.S., held charge of the forest settlement and demarcation offices of the Sholápur Collectorate in addition to the revenue charges as Assistant Collector of the Mádha and Karmála tálukás, and the following work has been performed during the year :—

- (1) *Sholápur Táluka*.—Settlement inquiries in respect of $4,675\frac{3}{4}$ acres of provisionally notified reserved forest have been completed, of which $4,242\frac{1}{4}$ acres were finally constituted under Section 19 of the Forest Act, and the balance was excluded. This work was approved and sanctioned by Government Resolution No. 6856 of the 27th September 1886. $881\frac{7}{8}$ acres of occupied lands have been acquired by purchase and exchange, leaving $2,939\frac{1}{4}$ acres still to be acquired.
- (2) *Bársi Táluka*.—41 acres have been settled and constituted by notification under Section 19.
- (3) *Mádha Táluka*.— $361\frac{7}{8}$ acres have been settled and constituted and $35\frac{3}{4}$ acres have been purchased.
- (4) *Karmála Táluka*.—Settlement inquiries were progressing. $1,122\frac{3}{4}$ acres of occupied lands inside demarcation schemes have been purchased, leaving $2,117\frac{7}{8}$ acres to be acquired.
- (5) *Pandharpur Táluka*.— $1,043\frac{1}{4}$ acres have been settled and declared Reserved Forests, and $386\frac{3}{4}$ acres of occupied lands have been purchased, leaving only $309\frac{3}{4}$ acres to be acquired.
- (6) *Sángola Táluka*.—Demarcation scheme was before Government. $850\frac{7}{8}$ acres of occupied lands were purchased.
- (7) *Málsiras Táluka*.— $568\frac{1}{4}$ acres of Reserved Forests were settled.

28. Forest settlement inquiries were completed during the year in the Bulsár, Chikhli, and Párdi tálukás of the Surat Collectorate in respect of all the lands notified under Sections 4 and 34 of the Forest Act, and were commenced in the Mándvi Táluka by Mr. Umedráam Ranchordás, District Deputy Collector, who performed this work in addition to his revenue and magisterial duties.

29. Mr. W.T. Morison, C.S., the energetic Forest Demarcation and Settlement Officer of the Panch Maháls, was transferred to Burmah, and gave over charge of his duties to Mr. G. M. Urquhart, Assistant Collector, on the 24th February 1887; but before his departure he had prepared and submitted demarcation schemes for the Godhra, Hálol, Jhálod, and Dohad tálukás, thus completing the forest demarcation of the whole district. The forest settlement report of the Kálol Táluka, the demarcation project of which had been satisfactorily arranged by Mr. Shewan, C.S., last year, was before Government. The net results of

the orders passed upon the several demarcation schemes has been to disforest entirely 2,889 acres less 801 rectification of area of Reserved Forest, to create 75,626 acres of "Protected Forest" under Chapter III of the Forest Act from forest areas more or less richly covered with timber, which had previously been notified as proposed Reserved Forests under Section 4 of the said Act, and to notify as proposed "Reserved Forest" 2,256 acres of waste land.

Jhálod Táluka.—26,902 $\frac{2}{5}$ acres, equal to 15 per cent. of the táluka, are included in the demarcation scheme, which was sanctioned by Government Resolution No. 8095 of the 16th November 1886.

Dohad Táluka.—46,519 $\frac{2}{4}$ acres, equal to 23 per cent. of the táluka, are included in the demarcation project, which was sanctioned in Government Resolution No. 848 of the 5th February 1887.

And in their Resolution No. 910, of the 9th February 1887, Government directed that these forests should be "Protected" and not "Reserved," because, in the opinion of Government, strict conservancy is difficult in these localities, and a variety of privileges have been granted in the forests the exercise of which would make them Reserved only in name. The two tálukás are comparatively high tableland, and contain the first sources of streams; the timber is chiefly teak: the forests growing on low hills and broken ground are fairly dense in places, and are generally improvable, many kinds of trees being represented. There is a local demand for firewood especially, and the extension of the railway line from Godhra through the Dohad Táluka to Rutlam will possibly create a further demand for export. The waste area outside the forest boundaries is considerable. For these reasons it may be found advisable, at no distant date, to bring the forests of Jhálod and Dohad under better treatment, and to convert them into "Reserved Forests."

Godhra Táluka.—Here the Reserved Forests gazetted under Section 34 of the Forest Act comprised 86,647 $\frac{3}{8}$ acres and the Protected Forests 17,183 $\frac{1}{4}$ acres. Subsequently in 1879, 1881 and 1884 additional 3,473 $\frac{1}{4}$ acres were notified as proposed "Reserved" under Section 4 of the Forest Act, and the original demarcation scheme prepared by Mr. Morison, the Special Assistant Collector, and generally approved by the Forest Department, provided for a "Reserved Forest" area of 96,033 $\frac{3}{4}$ acres with no "Protected" forests. Of the former, which has been gazetted under Section 34 of the Forest Act, 2,875 $\frac{1}{4}$ acres and of the latter 12,858 $\frac{7}{8}$ acres were proposed to be absolutely disforested. 4,325 $\frac{1}{2}$ acres of the forest lands in "Protected Forests" were proposed for conversion into "Reserved Forests." 3,462 $\frac{2}{4}$ acres of lands provisionally notified under Section 4 were likewise proposed to be finally constituted "Reserved Forest". 4,097 $\frac{3}{4}$ acres of available waste and 376 $\frac{1}{8}$ acres of occupied were also to be added to the "Reserved Forest." The net result of the demarcation scheme, which gave compact forest blocks in the most important teak-producing tract of the Panch Maháls, was the decrease of the then existing forest area by 11,270 $\frac{3}{4}$ acres. The forest officers objected to the exclusion of some of the better wooded tracts of "Protected Forest", which adjoin the old "Reserved Forests." Government, however, were of opinion that this demarcation scheme placed too much land in forest reservation, and did not provide sufficiently for a possible expansion of cultivation in the immediate future; and they declined to sanction it, and directed the special officer to revise it in consultation with the Land Revenue officers. A revised scheme was accordingly submitted; and finally Government in their Resolution No. 1318, dated 2nd March 1887, Revenue Department, sanctioned for the Godhra Táluka a "Reserved Forest" area of 72,446 acres and a Protected Forest area of 19,088. The net results of this sanctioned scheme are that the gazetted and notified "Reserved Forest" areas are to be decreased by 17,944 acres and the "Protected Forests", on the other hand, to be increased by 1,905 acres, the total forest area being decreased by 16,039 acres, and 16,473 acres of timbered lands more or less covered with teak trees formerly gazetted "Reserved Forest" become "Protected Forests." The boundaries of the forest reservations are made very irregular in places by these arrangements, which break into solid compact blocks.

30. No demarcation has been undertaken in foreign States by forest officers of the Northern Circle during the year, but orders have been passed by Govern-

ment upon the report of the Committee that had been specially appointed for the work regarding the demarcation of the catchment basins of the Fife and Bhatghar Lakes with the head-water systems of the Nira and Mutha Canals, to afford protection against the deposition of silt in the beds of the lakes and canals, with the consequent deterioration and possibly the ultimate destruction of these very costly and highly valuable projects, not only in the interests of agriculture, but also upon sanitary grounds, for the Fife Lake and Mutha Canal supply drinking water to the city of Poona and to the cantonments and civil stations of Poona and Kirkee. Mention is made, in paragraphs 31 to 33 of the administration report of last year, of the proceedings of the Committee of which Mr. Joshua King of the Civil Service, Collector and Political Agent of Sátára, was President, and two Executive Engineers of the Irrigation Department, Messrs. Burke, C.E., and Clifton, C. E., with the Conservator of Forests were members. The Commissioner, C. D., condemned the scheme as being, in his opinion, too sweeping, and impolitic; and Government in their Resolution No. 246 of the 12th January 1887 appointed Mr. Báláji Gangádhár Sáthé, Deputy Collector, on special duty to report to Government what scheme of forest demarcation and settlement can be carried out, and at what cost. The conditions to prevent silt accruing being taken into account, but should not be the only object, the interests of the rayats and the rights of the Pant of Bhor being considered also—kumri cultivation being put a stop to where possible. Mr. Sáthé had submitted no report before the close of the year.

2.—FOREST BOUNDARIES.

31. The work of "Demarcation" as technically used in the Forest Department Code, meaning the defining of the boundaries of forest reservations upon the ground, has been pushed forward with vigour in several districts, for it is of great importance that forest boundaries and forest boundary-marks should be recognized and recognizable as such when and where they may be seen. Instructions regarding the construction and location of special forest boundary-marks have been issued to all Divisional Forest Officers during the year, and the construction of the special marks has been regulated by the specification of them given. These instructions provide—

SPECIFICATION OF FOREST BOUNDARY-MARKS.

I.—In hilly country and also in the plains, where stones are to be found in considerable quantity, there shall be two classes of forest boundary-marks of the following specification :—

Shape.—A truncated cone.

Description.—Built of loose stones upon an excavated foundation, so that the lowest tier of stones shall be held in position and not pushed out by the weight of the superstructure, especially when the ground becomes wet and slippery. The interstices between the large stones composing the cairn are to be filled in with small stones, and the outer stones are to be wedged with stone chips. A shaped stone showing a height of at least 15 inches is to be fixed firmly on the top of the cairn in the centre.

Foundation.—Six (6) inches to be dug out.

Dimensions.—*First class mark* to have a base of 7 feet diameter, to be 5 feet high, and the top to be 4 feet diameter.

Second class mark to be on a base of 4 feet diameter, to be 3½ feet high, and to be 2½ feet in diameter on top.

Indicator.—A cut stone showing at least 15 inches clear of the cairn to be embedded firmly in the centre on top; the stone to be large enough; a serial number to be cut on it if required.

Colour-wash.—The stone to be colour-washed red annually, and lines of the same colour are to appear on the top of the cairn radiating from the centre stone, to show the direction of the boundary lines.

N.B.—Bámbug, or Euphorbia verrifolia, (Sabri), to be planted in clumps round each boundary-mark.

Position.—A 1st class boundary-mark to occupy main points and angles, such as where the boundary of a forest block, forest compartment, or village may intersect the forest boundary, and where the latter may take an abrupt turn.

A 2nd class boundary-mark to occupy intermediate points.

N.B.—(1).—The boundary-marks are to be placed at visible distances one from the other, so that from any mark its neighbouring one on both sides can be seen clearly.

- (2).—Where loose stones are not plentiful, instead of smaller cairns to occupy intermediate stations, the 1st class marks can be connected by a row of stones, showing one foot above ground placed in a single line, one guntha chain or 22 yards apart which are to be coloured red.

Approximate cost.—A 1st class boundary-mark can be constructed at an expenditure of from 7 to 9 annas and a 2nd class boundary-mark at a cost of from 2½ to 4 annas.

II.—In the plains, where loose stones are not plentiful, the forest boundary-mark may consist of a truncated cone made of earth well rammed, or of sun-dried bricks or it may consist of the ordinary revenue survey bándh or boundary-mark with a stone struck on the top, which will be coloured red, and the bándhs upon the forest boundary will be connected by stones showing 1 foot above ground, to be colour-washed red.

It is desirable that the reserves on the plains shall be fenced, and the fences will be supplemental to the boundary-marks for defining and protecting the forest boundaries. Living fences may be made of *Euphorbia verrifolia* (Sabri) and *E. tirucally* (Sher), *Opuntia dillenii* (Nagphani niwadung), *Inga dulcis* (Vilayati chinch or Deckni bábul), *Lawsonia alba* (Mendhi) *Cassalpinia sepiaria* (Chilhar or Mysore thorn), &c.

RULES FOR THE INSPECTION AND MAINTENANCE OF FOREST BOUNDARY-MARKS.

I.—The forest guard of the beat will be responsible for the maintenance and protection of all the boundary-marks in the forests of his beat, he will colour-wash them annually after the Diváli holidays, and will make a special report of having performed this work; he will repair with his own hands any marks that may become disarranged, and he will plant bámbas or other vegetation, as directed, round or close to each mark, and also upon the forest boundary line to form a living hedge.

Each forest boundary-mark in his "beat" is to be specially inspected by the beat guard, at least once in every three months, and a record of his inspection of marks is to be entered in his diary when it may occur.

II.—The round guard will be responsible for the maintenance and protection of the boundary marks in the forests of his round; he will see that they are maintained in proper repair, are colour-washed, as directed, by the beat guard, and that the required measure of planting upon the forest boundaries or at or near the boundary-marks is undertaken and performed by the beat guard.

The round guard will specially inspect every forest boundary-mark in the forests of his round once in every year, and will make a record of every inspection made in his diary when it may occur, and also will submit a special report to the Divisional Forest Officer upon the state and condition of the boundary-marks, forest boundaries, living hedge, &c., as soon as he may have completed the inspection of the boundaries of any forest village or forest block.

III.—The Range Forest Officer will, during the official year, inspect and specially report upon the state and condition of the forest boundaries and forest boundary-marks of not less than two miles of forest boundary in every "beat" in his range. A record of inspections made will be entered in his diary when they may occur.

32. The progress made and cost incurred upon demarcation of boundaries during 1886-87 in the different Divisions appears in the following statement:—

No.	Divisions.	Length of Boundaries.	NUMBER OF CAIRNS ERECTED.			Cost.		
			Large.	Small.	Total.			
		Miles.				Rs.	a.	p.
1	North Thána ...	50	700	1,622	2,322	1,266	5	6
2	South Thána ...	"	281	1,193	1,474	697	13	0
3	East Khándesh ...	"	198	669	867	332	9	0
4	West Khándesh ...	"	...	604	604	151	9	3
5	Násik ...	"	910	...	*910	44	4	0
6	Ahmednagar ...	"	600	1,247	1,847	886	14	0
7	Poona ...	"	3,031	3,984	7,015	2,314	4	9
8	Sátára ...	"	159	2,128	2,287	491	7	2
9	Sholápur ...	"	140	187	327	249	6	4
10	Surat ...	"	...	77	77	107	8	0
11	Panch Máhals ...	"	73	580	653	171	9	0
	Total ...		6,092	12,291	18,383	6,713	10	0

* 556 in Peint were erected without cost,

3.—FOREST SETTLEMENTS.

33. In the Thána Collectorate the settlement inquiries have been completed in the five sub-divisions of Sálsette, Bhiwndi, Kályan, Mokháda Peta, and Bassein; they are in progress in the Karjat Táluka and Khálápur Peta; and they have to be undertaken in the Máhim, Dahánu, Váda, Shahápur, and Murbád Tálukás, and in the Umbargaon Peta. It may be said that $\frac{2}{3}$ of the forest area of the district remain to be treated by the Forest Settlement Officer.

34. In the Khándesh Collectorate the settlement has been completed in the Sávda, Yával, Raver, Chopda, Shirpur, Sháháda, Amalner, Erandol, Jalgaon, Bhusával and Edlabad ranges, is in progress in the Jámner, Páchora, Bhadgaon and Táloda ranges, and remains to be commenced in Akrani, Nandurbár, Pimpalner, Navápur, Nizámpur, Dhulia, Sindkheda, and Chálisgaon ranges. About $\frac{2}{3}$ of the forest area of this Collectorate is still to be settled.

35. Out of the 12 forest ranges of the Násik Collectorate the forests of 9 have been settled under the Forest Act, and found to be free of all private rights, save of way; the settlement is in progress in 2 ranges, viz., Peint and Dindori, and it has to be made yet in one—Igatpuri. Thus about $\frac{7}{8}$ of the forest area of the Collectorate have been finally settled.

36. In the Poona Collectorate the work of enquiring into rights and settling the forests has been finished in the 6 ranges of Mával, Sirúr, Indápur, Bhimthadi, Bárámati, and has been partially done in the other 6 ranges of Junnar, Haveli, Mulshi, Purandhar, Khed, and Ambegaon. The forests of 111 villages were settled during the year: and probably one-third of the forest area of the Collectorate has to be settled.

37. The settlement inquiries in all the 11 tálukás and 2 petás or 13 forest ranges of the Sátára Collectorate have been completed, with the exception of lands newly acquired in 5 tálukás, the demarcation reports of which are before Government. Practically the work is finished in the Collectorate.

38. In the Sholápur Collectorate also the only settlement inquiries in the future will be in respect of such additional lands now occupied and included in the different demarcation schemes as may from time to time be acquired by purchase or exchanges.

39. The settlement of about 34 square miles of "Reserved Forests" in the Mándvi Táluka of the Surat Collectorate has yet to be made; but as very careful inquiries were conducted at the time these forest lands were first reserved when Mr. (now Sir) Théodore Hope was Collector of the district, the enquiries under the Forest Act will be of a purely formal nature.

40. In the Panch Maháls the forests of one range, Kálol, only have been completely subjected to settlement; the work has to be done in the four other ranges of Godhra, Halol, Jhálod or Dohád, or in about $\frac{7}{8}$ of the forest area.

41. Enquiries into forest rights in respect of inám alienated villages have likewise been made by the Forest Settlement Officers in all the divisions. Their opinions in each case, with a report of the circumstances of the Inámdárs' claim and the rights of Government so as to fix the legal status of respective proprietary rights in so far as the forests are concerned, are submitted to the Legal Remembrancer, who records his own opinion, and finally a formal order of Government is resolved and published. Thus in the Khándesh Collectorate Mr. Ommanney enquired into and reported upon 4 cases, and Mr. Lamb upon 76; and the orders of Government have been received regarding 77 of these 80 villages, 32 villages remain to be reported upon, and 35 villages remain for Government to pass orders upon. In the Poona Collectorate 29 villages remained to be disposed of at the commencement of the year; the Forest Settlement Officer submitted reports regarding 21 of these during the year. In the Sátára Collectorate all the inám villages have been subjected to enquiry by Mr. Báláji Gangádhár Sathé in a very careful and able manner, and the orders of Government have been published in the cases of 53 villages up to the end of the year. In a few years hence there will be a complete record, the result of very detailed and exact inquiries, of not only the proprietary rights of Government on the one hand and of private individuals on the other, but also of rights of user in respect of all forests and timber growth in the Presidency.

4.—PRIVILEGES CONCEDED TO VILLAGERS.

42. In the Thána, Násik, Ahmednagar, Poona, Sátára, Sholápur, and Surat divisions no change has been made during the year in nature and extent of privileges previously conceded in "Reserved" and "Protected Forests."

43. In the Khándesh Collectorate the privileges sanctioned by Government Resolution No. 1540, dated 25th February 1886, have been modified, and the following Code has been sanctioned :—

CODE OF RULES

REGARDING THE EXERCISE OF PRIVILEGES IN THE FORESTS OF THE NORTH TA'PTI TA'LUKA'S
OF THE KHA'NDESH COLLECTORATE.

I.—The North Tápti tálukás include—

1. Taloda,
 2. Sháháda,
 3. Chopda,
 4. Shirpur,
 5. Sánda (with the Yával and Ráver Petás),
 6. Pimpalner (with Navápur and Nizámpur),
 7. Nandurbár,
- } By special order.

II.—A forest village is a village which has contributed land to forest.

III.—An inhabitant of a forest village is a person resident in a forest village.

IV.—The inhabitants of other than forest villages have no forest privileges.

Exception.—Privilege No. VIII (*f*) may be exercised by all Bhils and other wild tribes resident in the táluka in which the forest block is situated.

V.—The privileges may be exercised by the inhabitants of a forest village throughout the unclosed portions of the block to which their village has contributed, but not in other blocks.

Exception.—See note below, No. VII (*b*).

VI.—Goats will not be permitted to graze in the forests without the express permission of the Conservator of Forests.

VII.—The inhabitants of forest villages may, free of charge in the unclosed portions of the forest lands,—

(a) graze all cattle *boná fide* their own property ;

Exception.—This privilege does not extend to professional graziers.

(b) cut and remove grass, including baru, for their own use, sale or barter ;

Note.—This privilege may also be exercised in such portion of the closed area as can, in the opinion of the Divisional Forest Officer, be safely opened for grass cutting only.

(c) collect dead-wood, except teak, tivas and khair, for fuel for domestic use, but not for sale or barter ;

(d) take or quarry khári-earth, stone and similar material for their own use in places assigned by the forest officers ;

(e) take teak leaves for their own use ;

(f) cut thorns and brushwood for their own use with the previous permission of the Divisional Forest Officer, at the places and of the kinds pointed out by the Divisional Forest Officer.

VIII.—Bhils and other wild tribes are granted the following additional privileges :—

(a) They may collect dead-wood of all kinds, except teak, tivas, and khair, free of charge for private use.

(b) They may collect for sale or barter dead-wood of any but the three reserved kinds, on payment of the same fees as have hitherto been levied, namely :—

Rs. 2 per cart-load ; annas 2 per head-load.

1 teak, 2 blackwood, 3 ain, 4 chinch, 5 bábul, 6 khair, 7 tivas, 8 hirda, 9 dhávda, 10 nim, 11 awal, 12 mango, 13 chároli, 14 mowra, 15 jambul, 16 anjan.

free of charge for domestic use.

(c) They may cut live-wood of any but the 16 reserved kinds for sale or barter on payment of the following fees :—

				Rs.	a.	p.
Each cart-load	...	...	...	1	0	0
Each head-load	...	...	...	0	1	0
Large bámbus, per 100	...	...	...	2	0	0
Small do. do.	...	...	...	1	0	0
Head-load of bámbus	...	...	...	0	2	0

(e) They may cut free of charge—

- (1) bámbus for private use or for their own manufactures ;
- (2) in the Akráni Pargana "Ain" and "Dhávda" for private use under the supervision of the forest officers.

(f) They may collect honey, wax, gum, mowra (flowers and fruits) and other minor produce, except hirdas, free of charge for private use, or for sale or barter.

IX.—The Collector may suspend, until further orders, the exercise of any privilege on his being satisfied that it is being abused, and shall then obtain the orders of Government regarding the term of the suspension or the permanent withdrawal of the privilege abused.

X.—Under Section 78 of the Forest Act all persons enjoying privileges in forests are bound—

- (a) to give information respecting the commission of any forest offence ;
- (b) to assist Government officers in extinguishing forest fires and in preventing theft, mischief and other forest offences, and in discovering and arresting offenders.

CODE OF PRIVILEGE RULES,

FOR SOUTH TÁPTI TÁLUKÁS AS SANCTIONED BY GOVERNMENT RESOLUTION
No. 7592, DATED 19TH SEPTEMBER 1885.

I.—The South Tápti tálukás are :—

Bhusával including Edalabad Peta.

Jámner.

Jalgaon.

Erandol.

Amalner with Párola Peta.

Páchora with Bhadgaon Peta.

Chálisgaon.

Dhulia.

Sindkheda.

II.—A forest village is a village that has contributed land to forest.

III.—An inhabitant of a forest village is a person resident in a forest village.

IV.—The privileges allowed are permitted to inhabitants of forest villages only.

V.—No special privileges are permitted to Bhils and wild tribes.

VI.—Inhabitants of forest villages may free of charge—

- (a) cut grass, including baru, in the open compartments and in such portion of the closed area as can in the opinion of the Divisional Forest Officer be safely opened for grass-cutting only, the grass so cut being at their disposal for any purpose.

Exception.—This privilege may not be exercised in those portions of forests which are "Mámul kurans," and in which the grass is annually sold by auction.

Government Resolution No. 7467
of the 15th September 1885.

Note.—The grass cut by the Forest Department in the unopened part of the closed area is to be given free of charge to the villagers of any forest village of the block in which it has been cut if required by the Collector.

- (b) in the open compartments only, collect for their own use dead-wood branches—not trunks—of all trees except teak, khair, and tivas.
- (c) collect mowra, honey, wax, gum, and all jungle fruits, except hirdás, which belong to Government, for their own use or for sale.
- (d) take or quarry khari-earth, stone, and similar material in places assigned by the forest officers.
- (e) gather teak leaves from side branches of trees outside forest boundaries or felled in forest in the course of departmental felling operations.

VII.—The Collector may suspend until further orders the exercise of any of the foregoing privileges on his being satisfied that it is being abused, and shall then obtain the orders of Government regarding the term of suspension or the permanent withdrawal of the privilege abused.

VIII.—Wood required for ploughs or houses and firewood shall, subject to the capability of the forest to furnish such wood and to the working of the working-plan, be supplied by the Forest Department on application at rates to be fixed by the Forest Department with the approval of the Commissioner to inhabitants of forest villages from the block to which such villages contribute ; or if the Forest Department is unable to meet the application from its own fellings, the applicant may, at the discretion of the Divisional Forest Officer under the orders of the Collector, be granted, on payment of fees at a scale to be fixed by the Forest Department with the sanction of the Commissioner, a permit to cut, under the supervision of the forest officers, specified quantities of specified trees in specified places for his own use only for the purpose named in the permit.

44. The Resolution of Government provides that the privileges are to be exercised only in the unclosed portions of the "Reserved Forests," and it directs that the definition of closed and unclosed portions of the forests should be made by the Revenue Authorities after consulting the Forest Officers. The exercise of privileges such as are conceded in the above Code will do no harm to the forests, if in the first place the area of closure or rather the areas to be opened to grazing and to cutting trees and exploiting wood are arranged with due regard to the productive capability of the forests. Cuttings of trees cannot go on promiscuously over a large portion of the forests at one time without doing serious injury to the powers of reproducing; the size of the portion of a forest to be open to the felling of timber in one year must be determined by the total forest area and the habits, conditions, and growing power of the trees in the circumstances which surround them. After the revolution has been settled then the size of the area to be open to the cutting of trees or "the coupe" of the year of a particular tract of forest can be ascertained and defined. The convenience of those to whom the exercise of privileges may be given cannot regulate entirely the location of "the coupe," and the number of people to exercise privileges cannot influence its dimensions beyond a given point, save at the deterioration of the forests. The unclosed portion of the forest, in the words of the Government Resolution, means the area open to grazing; this area and "the coupe" of the year cannot conform to each other, for it is not necessary, even were it politically possible to do so, to close against grazing such a large proportion of the forests, taking the North Tápti Reserves as the case in point, as is required for closure for the growth of trees and improvement of the forests. The consideration of the grass crop and of the well-being of the forests where the grass grows must together regulate the location and extent of the unclosed portion of the forest, and the number of cattle to be permitted to graze and the season for pasturage. It is for the science of forestry to arrive at and to make the definition of the closed portion of the forests against fellings of timber of different descriptions, and against grazing either entirely or partially.

45. In the 'Panch Maháls extensive privileges have been allowed to the people. In the Jhálod and Hálol forests, where the forests are to be entirely "Protected Forests" to the exclusion of "Reserved Forest," the following privileges are allowed :—

- (a) Free grazing for all cattle, the *bonâ fide* property of cultivators, and not kept for purposes of trade,
- (b) Cutting, stacking, and removing grass free of charge.
- (c) Collecting and removing, free of charge, every description of minor forest produce, including mowra.
- (d) Cutting and removing thorns for fencing purposes free.
- (e) Taking free all dead leaves and the live leaves of the khákra (*Butea frondosa*).
- (f) Cutting and removing, free of charge, branches of the saleda required for marriage ceremonies.
- (g) Removing, free of charge, head-load of dead-wood of all sorts, including teak; and where whole trees or large branches have fallen, cutting them up for removal.

- (h) When reasonable requirements cannot be met from lands outside the reserves, of supplying themselves free of charge with timber of all but the 17 marginally noted trees for *bonâ-fide* domestic and agricultural consumption, the question as to the sufficiency of the supply outside the reserves to be decided in each village by the revenue officers, and free passes given for the timber required from the reserves. In the Godhra Táluka forests, Government in Resolution No. 1318, of the 2nd March 1887, have sanctioned the undermentioned privileges :—

1. Teak.	9. Bábul.
2. Blackwood.	10. Dhávda.
3. Bhia.	11. Sadra.
4. Timru.	12. Mowra.
5. Rohan.	13. Mango.
6. Ryan.	14. Tamarind.
7. Mokho.	15. Nim.
8. Khair.	16. Beheda.
	17. Chárolí.

"Inhabitants of all forest villages to cut grass for their own use free of charge in all Reserved Forests, except in the portions of 11 forests, the grass of which is annually sold by the Forest Department for cutting. They may collect leaves of all kinds, cowdung, wild fruits of all kinds, except hirda and mowra, wax, honey, lac, and gum. They may collect head-loads of fallen dead-wood of all kinds for their own *bond-fide* use, but not for sale. They may take cart-loads of such wood for their own *bond-fide* use on payment of very moderate fees, which should be settled by the Collector. Passes for such loads should be issued by round guards as well as by rangers. They may have free grazing for all their own cattle."

46. A privilege of cutting all but a few reserved kinds of trees all over the forests must necessarily lead to the creation of extensive blanks in such portions of forests where none or very few of the reserved kinds of trees may be represented.

47. The expenditure incurred upon the creation and constitution of forests in the Northern Circle during the year has amounted to Rs. 1,36,767-2-0, distributed thus :—

	Rs.	a.	p.
(1) Salaries and travelling allowances of Forest Settlement Officers not charged against the Forest Department	87,569	4	8
(2). Salaries and travelling allowances of establishments employed under the Forest Settlement Officers and charged in the forest accounts and the contingent expenditure of the latter	25,398	2	5
(3) Demarcation of forest boundaries upon the ground by the construction of special forest boundary-marks.	6,713	10	0
(4) Compensation for land and rights	17,086	0	11
Total ...	1,36,767	2	0

CHAPTER II.

SURVEYS AND WORKING PLANS.

(A)—SURVEYS.

48. The survey of the Thána forests upon the scale of 8 inches to the mile was commenced by a Topographical Survey Party of the Government of India working under the direction of Colonel A. Pullan, Deputy Superintendent in charge No. 17 Party Gujarát Survey, with Mr. J. Newland as his Assistant, who conducted the work in the Thána forests. A commencement was made in that portion of the Collectorate where the largest available topographical survey maps are on the scale of 2 inches to 1 mile. The scale of 8 inches for the Thána forests was selected after careful consideration of the size and description of forest maps necessary in the Thána Collectorate, where complicated questions of local requirements in the produce of forests affect the management of the State properties; there are over 1,300 forest villages in the district, the greater portion of the inhabitants of these and also of all the other villages on the seaboard and elsewhere come to the forests for the satisfaction of their wants in raw material, in firewood, timber, grazing, grass, &c., on payment or free, and there is a considerable population looking to the forests for subsistence in cutting, collecting and carrying timber and other forest produce. Consequently, as the State forests cover the greater portions of nearly all the hill ranges which ramify in all directions, forming an apparently confused but very consistent tracery of ridges and watersheds over the Konkan, and giving a constant succession of steep lofty hills and narrow valleys, the presence of a large number of "coupes," at not very irregular distances, over the whole country is essential to the convenience of villagers, as well as advantageous to forest conservancy. Many of these "coupes" must perforce be of small area, and maps of such a scale as will show correctly the physical configuration of the country over spaces of a few acres only are wanted. Really useful forest maps should be upon a scale large enough

to show the boundaries of the forests, the position of each boundary-mark, of the several private properties touching the forest boundaries, and all internal sub-divisions of a forest block with their respective boundaries. The 8 inches scale is quite large enough to serve all these purposes, and it is none too large; it does not give unwieldy maps. Moreover, it corresponds with the scale of the Bombay Revenue Survey Department; and the advantage of having forest maps upon the same scale as the village maps is a decided recommendation. In France the scale of the forest surveys are $6\frac{1}{2}$ inches and $12\frac{2}{3}$ inches to the mile. The forest survey last season in the Thána District made no very great progress—only $52\frac{4}{5}$ square miles having been plane-tabled and mapped, the hill contours having been arrived at by water-levelling. 544 stations were trigonometrically determined, extending over an area of 107 square miles; and 156 linear miles of traverse work along forest reserve boundaries was undertaken. 12.5 square miles of the surveyed area lies in the Sálsette Range and the remainder in the Kalyán Range. But the cost came to Rs. 257 per square mile. This was very heavy, and it is attributed by Colonel Pullan to the forest boundaries not having been defined, well in advance of the survey, and to the work being new. In the future, the cost will, it is expected, be very much less. And it is not improbable that with a local forest survey branch, such as the Forest Department of the Government of India have organised, the cost could be reduced to Rs. 120 per square mile.

(B)—WORKING PLANS.

49. Mr. T. B. Fry, Deputy Conservator of Forests, 3rd Grade, has been in charge of the Working Plans Division throughout the year. The subordinate staff consists of field and office establishments, and they are all borne upon the "*Temporary Establishments*" list. The office establishment comprises 1 clerk on Rs. 40 per mensem and 4 peons on Rs. 8 each. The field staff at the commencement of the year consisted of 4 surveyors, and during the recess, from 1st June, the number was reduced to 2; but when the working season opened in November, the staff was increased to 8 surveyors and 12 enumerators; and in January, when the work of determining the boundaries of forest reservations in the Thána District had to be undertaken, and the demarcation to be pushed on vigorously, 4 more surveyors and 12 mukádams were entertained. The examination of a teak forest of 4,300 acres in extent at Virár, in the Bassein Range, and the preparation of a provisional working plan for its management were completed at the outset by Mr. Fry and his staff. And then the determination of the coupes of the two seasons 1885-86 and 1886-87 in the Thána District, with an estimate of the material exploited and of the growing material left standing, were undertaken, and several test plots were carefully measured in various parts of the forests, and their contents counted and registered according to fixed classifications, in order to arrive at a fairly accurate knowledge of the capability of the forests. It soon became apparent, however, that further work of a similar character could not be satisfactorily carried out, for several reasons, the chief one being that the demarcation of the reservations by distinguishable boundary-marks upon the ground was required to be made in advance, not only of the forest survey, but of the differentiation of forest areas. And at a conference held by the Conservator with the Divisional Forest Officers of North and South Thána, and of Working Plans, at Chandai, in the Thána District, it was decided that the circumstance of the Thána forests required the very early completion of a systematic arrangement of working, maintaining, and improving the entire forest area of the two divisions in preference to very elaborate schemes for limited areas, the preparation of which must necessarily be a work of time; and the delay, that would follow in the disposal of the whole forest area of the entire Collectorate, might be disastrous, for a haphazard system of promiscuous fellings must tend to the deterioration of the growing stock, some areas being overworked and others not worked sufficiently to develop their powers. So long as the axe was directed by fancy and speculative effort, the result could in no way be satisfactory. The condition of the Thána forests does not favour schemes of very scientific elaboration, and the surrounding circumstances point to certain factors which must regulate to a great degree the internal economy of working schemes for the Thána forests. The existence of a large local population depending for subsistence in a great measure upon the labour to be provided by felling, collecting, stacking, exploiting timber and other forest produce, and also making a constant

demand upon the produce of the forest for agricultural and domestic requirements; the country being a succession of lofty hills and narrow valleys, with the forest estates spreading over the hills, and the villages in the valleys intermingling with the forest areas; the teak being the predominating tree in the forest and possessing vigorous powers of reproduction by coppice shoots, the ill-treatment the teak and its associates in the Thána forests have received from man for years past, and consequently the impaired condition of the forests; the great value of all forest produce owing to the demands of a very large local population combined with the demands of the city of Bombay at the door of the forests with a population of 8,00,000, and the city of Poona connected with the forests by railway communication 50 miles distant from the nearest point; the absence of timber of large scantling, and the ready market for small timber, which better serves the necessities of the peasantry, and for every stick of firewood; the facilities afforded by three lines of railway, tidal creeks, and other channels of inland navigation, cart-roads and tracks penetrating up to the head of every valley, and up the sides and summits of many hill ranges, for smuggling timber and robbing the forests; and the very large section of the population who are in league with timber-dealers and ever on the look out to make raids upon the Government forests and run timber into Bombay;—all these considerations point to the location of “coupes” of comparatively small size each at almost regularly recurring distances all over the forest area, the size of a coupe varying according to situation from 30 to 70 acres, so that proper supervision may be exercised over the “exploitation” of their material, under which term besides actual fellings may be included every operation to be performed in the coupe, such as valuation of the crop, marking and registering the reserves, testing the registers after the felling is completed, counting and classification of material extracted, and other minor works; and so that forest villagers and the peasantry generally may not have to go inconvenient distances from their houses for labour, and prohibitive distance in the light of the cost of carriage for their supplies of timber and other forest produce to be obtained free or on payment, and for the enjoyment of pasturage in forests by their cattle; and that a wood-cutting race may find a congenial honest occupation in every direction close at hand, and thus be diverted from plundering the forests which are so exposed on all sides

50. It was decided, after careful investigation into the rate of growth of timbers, and study of the biology of the teak tree in the Thána forests, that a revolution of forty years might safely govern the differentiation of the forest blocks. The length of rotation having thus been fixed, and the approximate size of coupes having been determined, the arrangement and distribution of forest working blocks followed in natural sequence, their extent and position being controlled also to a great extent also by the necessity of obtaining suitable physical boundaries. Mr. Fry and his establishments were thus engaged throughout the year, while employed in the Thána Districts, in—

(a) the demarcation of the forest limits of the settled and unsettled reservations in the Bassein, Sálsette, Kalyán, Bhiwandi, Karjat, and Khálápúr ranges,—14,427 chains of forest boundary lines having been defined by 2,848 special forest boundary-marks;

(b) the differentiation of forest areas over the greater portion of the Collectorate. In consultation with the Divisional Forest Officers, “Reserved Forests,” settled and unsettled, were arranged by Mr. Fry into working blocks varying from 1,000 to 4,000 acres in size upon the topographical survey maps. Unworkable areas, or climatic portions of forest tracts consisting of hill tops, steep precipices, the uppermost slopes of lofty mountains were, according to their special circumstances, excluded, and the workable tracts were sub-divided into compartments;

(c) the selection of the “coupes” for the coming year, their location having been arrived at under the knowledge of fellings made in past years, and of the present state of the forests; coupe maps were prepared on the 8 inches scale, each one being tested and signed by the Divisional Forest Officer of Working Plans, and issued, to be a guide in

(d) the demarcation of the "coupes" upon the ground, their boundaries being defined by special marks;

(e) the estimation of the standing crop of timber in each coupe, and the selection and marking of the reserves which was made by means of serial numbers and two rings of paint round each tree. The subordinate protective establishments of the two divisions under their superior officers co-operated in the demarcation, valuation and selection of reserves, and the registration of the trees to be felled and the trees to be retained.

51. Seeing that the forest area of the two divisions may exceed 1,000 square miles of "Reserved Forests", and that there are upwards of 1,330 forest villages, the marking out of the coupes, of the reserves or standards, and the valuation of the yield is a very laborious and responsible operation. The number of forest blocks is very large, from 30 to 50 in a range. It was not possible to differentiate in this way the entire forest tracts in the whole Collectorate, but the portions not touched last season for the want of more time and money will be done next season.

52. The completion of a simple general scheme of forest working for the whole Collectorate, which is at the same time based upon sound principles of silviculture, is, the Conservator would urge, the best plan to adopt in connection with forest working plans of very extensive areas upon which there is considerable demand for produce, and the condition of which urgently presses for improvement. Elaborate calculations with detailed measurements and enumerations of all and every tree in a forest necessary to arrive at "an inventory of the forest" may be suitable and desirable in connection with the preparation of working plans for small timber estates or specially valuable forest which are free of the exercise of privileges inimical to a proper state of forest conservancy, and have been and may be efficiently protected, but for forests circumstanced as those in the Thána Collectorate a more rough and ready system would appear to be wanted. The number of coupes being large and widely distributed, the greater yield from some will counterbalance the smaller yield from others, and an average yield per acre for purposes of budget estimates can be safely arrived at for the range and for the division which will give a sustained annual yield. The coupes selected for next year are so located as to form the first of a series of ten, which can be worked in succession in such a manner that one-fourth of the working block will be dealt with during one-fourth of the revolution, and when the second rotation comes round, such of the sound growing trees which have now been reserved—their number is small generally—as may then be found to be sound and still maturing will be reserved, with such sound seedlings as may have come up during the interval, for another forty years.

53. During the rainy season, while in recess, Mr. Fry delivered a series of lectures on forestry to the forest class at the College of Science, Poona, and he made a tour with the Divisional Forest Officer, Poona, to the bábúl reserves in the valley of the Bhima River, and arranged for a registration of their areas, contents, &c., with the view to the preparation of a working plans for these very valuable properties. Mr. Vishnu Mahádev Tilak, Range Forest Officer of Haveli, performed the necessary work in a very intelligent, careful, and highly creditable manner.

54. In the South Thána Division, compartments were set out in the bed of the Tansa Lake at R. L. 350 and at R. L. 425, with the object of disposing of the trees standing upon the bed of the lake, which will measure about 5,025 acres, before the water is impounded, and the land submerged.

55. The revision survey by the Bombay Revenue Survey Department was working in several directions in the Deccan and Konkan, and the forest reservations in each village were re-measured and all internal boundaries having been abolished, they were formed into single survey numbers in the series of the village system. The work of sub-dividing survey numbers, parts of which have been included in forest conservancy schemes and parts excluded for cultivation, was undertaken in different directions by surveyors attached to the different Forest Settlement Officers.

56. The expenditure under A. VIII c Surveys during the year amounts to Rs. 18,106-9-1.

CHAPTER III.

PROTECTION AND IMPROVEMENT.

(A)—ESTABLISHMENTS.

57. The superior forest staff allotted to the Northern Circle consists of 1 Conservator of Forests, with 13 Deputy and Assistant Conservators of Forests, for the administration of the forests of 12 divisions.

58. Mr. W. H. A. Wallinger, Deputy Conservator of Forests, 1st Grade, returned from furlough in the month of October 1886, but his health failed again in the voyage out, and he had to take sick leave in this country, and finally to retire from the service on pension upon a medical certificate from the 21st April 1887.

59. Mr. George St. Patrick Lawrence Gibson, Deputy Conservator of Forests, 2nd Grade, was away on furlough to Europe throughout the year, and resumed charge of his duties as Divisional Forest Officer of West Khándesh on the 31st March 1887. On the 18th May following, this officer had the misfortune of being attacked in the Navápur forests by a tigress, which had taken to killing human life, and which he was tracking up with a view to the accomplishment of her destruction; and though he mortally wounded her when she charged out upon him, still she contrived to bite him in the left arm and leg as she fell dead upon him knocking him down. Mr. Gibson was conveyed to Bombay by Colonel Pullan, Deputy Superintendent of Survey, and was tended with the greatest care at the European General Hospital, but unfortunately he sank, and died on the 13th July 1887 from the effects of the wounds he had received from the tigress. By his death Government have lost an active and energetic Forest Officer, whose sympathies were always with the people, especially the wild tribes of the forest districts, where he was employed, and who evinced great regard for him.

60. Mr. R. S. Fagan, 4th Grade Deputy Conservator of Forests, was absent on leave all the year through.

61. Of the class Sub-Assistant Conservators there are 7 appointments assigned to the Northern Circle; and they have all been occupied throughout the year.

62. Mr. Govind Rámchander Mahájan, an excellent officer, of whom special mention was made in paragraph 172 of the administration report of last year, proceeded on sick leave on the 9th March from the Sátára District, and died not long afterwards. Government have thus lost a very hard-working, honest loyal, and able Native officer.

63. The numerical strength and constitution of the subordinate forest protective establishment has remained unchanged, their monthly cost amounts to Rs. 21,503, and their distribution among the different divisions is as under:—

No.	Forest Divisions.	Number of Ranges.	RANGE FOREST OFFICERS.						Forest Guards.						Remarks.	
			Rangers.				Foresters.									
			Rs. 100	Rs. 80	Rs. 60	Rs. 50	Rs. 40	Rs. 30	Rs. 20	Rs. 15	Rs. 12	Rs. 10	Rs. 9	Rs. 8		Rs. 7
1	North Thána	6	3	4	6	12	20	30	30	6	14	25	25	70	80	The pay of the rangers and foresters is personal, and the men are transferred from one range to another and from one division to another as the exigencies of the service may require. Therefore the number of appointments in each grade is shown in lump for the whole circle.
2	South Thána	8								8	14	25	23	70	115	
3	East Khándesh	13								8	16	20	20	40	75	
4	West Khándesh	10								7	14	18	18	50	102	
5	Násik	14								10	20	25	26	50	158	
6	Ahmednagar	11								6	12	22	22	50	85	
7	Poona	11								9	17	26	25	60	120	
8	Sátára	14								9	18	24	22	57	102	
9	Sholápur	7								3	6	11	8	16	68	
10	Surat	6								2	4	4	6	18	27	
11	Panch Maháls	5								2	5	10	10	30	48	
Total		105	3	4	6	12	20	30	30	70	140	210	205	511	980	

64. In the Poona Forest Division a temporary establishment of 15 forest guards on Rs. 8 each, and 30 forest guards on Rs. 7 each, is retained all the

year round, in addition to the permanent staff, for the proper protection of the forests, which would otherwise suffer from defective conservancy owing to insufficient numerical strength.

65. The Divisional Forest Officer, North Thána, reports that much inconvenience still continues to be felt in consequence of the reduction made, last year, of 39 forest guards; and experience has shown that the measure was not of sound economy, for several notable cases of robberies have occurred in both forest divisions of the Thána District, the establishments being too few in numbers to guard effectively the forest estates, which are open on all sides to be depredated by a large section of the population, who subsist mainly upon wood-stealing, and are incited by timber-dealers to prey on the forests and upon the Government timber on occupied lands.

66. The Divisional Forest Officer, West Khándesh, reports that, on an average, the beat guards in his district have an area of about 5,700 acres of forest to protect and look after in other ways, and that a "Forest Beat" of this size is clearly too large for one forest guard to watch and tend properly.

67. The Divisional Forest Officer, Panch Maháls, remarks that where the subordinate protective establishment is almost numerically sufficient, as in Godhra and Kálol, there the general protection of the forests from thefts is fair. In Dohad, Jhálod, and Hálol the present establishment is not large enough to efficiently protect the areas under its charge, protection in many cases is indifferent, and the forests suffer accordingly.

68. A large number of forest subordinates has been punished by dismissal from the service during the year. In the North Thána Division the Range Forest Officer of Umbargaon, 4 round guards, and 5 beat guards have suffered for dishonesty; a former range forest officer of the South Thána Division, who was under suspension at the commencement of the year, was dismissed in connection with the Kalyán teak robberies, and 2 round guards likewise shared his fate. In the Násik Division 1 ranger on Rs. 100 pay, 1 range forest officer, 5 round and 1 beat guard have been discharged the service for connection with frauds and complicity in forest thefts, and in the Ahmednagar Division a range forest officer was dismissed for embezzlement of grazing fees. In every case, where appeal has been made to Government against the conviction and the sentence of dismissal finally passed by the Conservator, the justice of the conviction has been recognized, and the sentence has been upheld. The office establishments in entertainment and distribution during the year are given in the following table, which exhibits their monthly cost. There have been no serious offences among the members of this branch, and the work performed by them has been very creditable to all:—

No.	List of Offices.	NUMBER AND GRADATIONS.											Monthly Cost.	
		Clerks.							Peons.					
		Rs. 100	Rs. 80	Rs. 60	Rs. 50	Rs. 40	Rs. 30	Rs. 20	Rs. 15	Rs. 10	Rs. 9	Rs. 8		
													Rs.	
1	Conservator's or "Direction."	1	1	1	2	2	2	2	...	1	1	5	579	
2	North Thána Divisional...	...	...	...	1	1	1	1	2	...	1	3	203	
3	South Thána do.	...	...	...	1	1	1	1	2	...	1	3	203	
4	East Khándesh do.	...	...	...	1	...	1	2	2	...	1	3	183	
5	West Khándesh do.	...	...	...	1	...	1	2	2	...	1	3	183	
6	Násik do.	...	...	...	1	...	1	2	2	...	1	3	183	
7	Ahmednagar do.	...	...	...	...	1	1	2	2	...	1	3	173	
8	Poona do.	...	...	...	1	...	1	2	2	...	1	3	183	
9	Sátára do.	...	...	...	1	...	1	2	2	...	1	3	183	
10	Sholápur do.	...	...	...	...	1	1	2	1	...	1	3	158	
11	Surat do.	...	...	...	1	...	1	2	2	...	1	3	183	
12	Panch Maháls do.	...	...	...	...	1	1	2	1	...	1	3	158	
13	7 Sub-Assistant Conservators, Sub-divisional	...	...	...	...	...	...	7	...	...	14	217		
	Total	...	1	1	1	10	7	13	22	27	1	12	52	2,789

69. The total expenditure incurred upon forest establishments during the year has amounted to Rs. 4,53,218-1-5 :—

	Rs.	a.	p.
B. I. a.—Conservator's salary	18,000	0	0
B. II. a.—Conservator's travelling allowance ...	2,400	0	0
B. I. b.—Superior officers' salary	95,734	14	5
B. II. b.—Superior officers' travelling allowance ...	27,489	8	6
B. I. c.—Subordinate Protective Establishment salary .	2,46,901	13	7
B. II. c.—Subordinate Protective Establishment travelling allowance	13,924	12	8
B. I. d.—Office Establishments' salary	32,676	8	8
B. II. d.—Office Establishments' travelling allowance ...	12,199	4	3
A. VIII. f.—Cost of Temporary Establishment ...	3,891	3	4
Total ...	4,53,218	1	5

(B)—GENERAL PROTECTION AND BREACHES OF FOREST LAWS.

70. The following table shows the number and result of prosecutions of forest offences in the year under report and in previous years, respectively :—

No.	Divisions.	1885-86.		1886-87.		Percentages of Failures.	
		Prosecutions.	Acquittals.	Prosecutions.	Acquittals.	1885-86.	1886-87
1	North Thána	18	11	42	10	61·1	23·8
2	South Thána	97	57	81	28	58·7	34·5
3	East Khándesh	46	13	25	9	28·2	36·
4	West Khándesh	44	16	53	21	36·3	39·6
5	Násik	35	8	150	18	22·8	12·
6	Ahmednagar	122	38	146	64	31·1	43·8
7	Poona	230	51	99	24	22·1	24·2
8	Sátára	42	17	87	71	40·4	81·7
9	Sholápur	36	21	88	25	58·3	28·4
10	Surat	24	...	4	2	...	50·
11	Panch Maháls	53	13	36	6	24·5	16·6
	Total ...	747	245	811	278	32·7	34·2

71. There were 57 cases, not disposed of, from last year at the beginning of this year. Of the 533 cases tried during the year, in respect of which convictions were obtained, 1,250 individuals were sentenced to punishment of different descriptions and degrees. The 278 cases acquitted affected 678 individuals, and at the close of the year 85 cases were standing over for completion of magisterial proceedings: they were distributed as under :—

South Thána	13 cases	Ahmednagar	14 cases.
East Khándesh	3 "	Poona	3 "
West Khándesh	38 "	Sátára	2 "
Násik	6 "	Sholápur	6 "

72. The percentage of failures in forest cases will always be high where the witnesses are chiefly fellow-villagers of the accused, who, in the interval between the discovery of the offence and the trial, are prone to be forgetful of the facts that came under their observation, and are found more ready to give evidence in favour of the accused than against him, and at variance with the account they originally gave of the transaction.

73. The forest offences in respect of which prosecutions have been instituted during the year, classified under the four different heads of crime prescribed by the Forest Department Code, appear as under :—

No.	Forest Division.	CHARACTER OF OFFENCES.				Remarks.
		Injury to forest by fire.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	
1	North Thána ...	...	41	.....	1	
2	South Thána ...	3	73	.....	5	
3	East Khándesh ...	10	9	2	2	
4	West Khándesh ...	4	24	55	6	
5	Násik ...	2	119	5	25	
6	Ahmednagar ...	...	33	71	31	
7	Póona ...	1	54	17	28	
8	Sátára ...	3	56	14	11	
9	Sholápur ...	...	9	55	24	
10	Surat ...	...	2	.....	2	
11	Panch Maháls ...	...	35	.....	1	
Total ...		23	455	222	139	

74. Of the 82 cases in the Ahmednagar Division, in respect of which convictions were obtained, the punishments awarded consisted of fines in 79 cases, and in imprisonment in 3 cases only.

75. In the 2 Thána forest divisions forest offences committed in "Protected Forests" and in lands provisionally notified under Section 4 of the Forest Act were dealt with under Section 43 of the Land Revenue Code by Assistant Collectors. The comparative result with last year is as under :—

No.	Forest Division.	1885-86.					1886-87.				
		Number of Cases.	Value of Forest Produce.	Acquittals.	Convictions.	Amount of Fines.	Number of Cases.	Value of Forest Produce.	Acquittals.	Convictions.	Amount of Fines.
			Rs. a. p.			Rs. a. p.		Rs. a. p.			Rs. a. p.
1	North Thána ...	6	25 6 0	...	5	21 6 0	13	150 4 0	...	13	223 1 3
2	South Thána ...	112	214 4 8	...	...	.....	141	.....	...	141	484 3 6
Total ...		118	239 10 8	...	5	21 6 0	154	150 4 0	...	154	707 4 9

76. A comparative statement showing the number of cases compromised under Section 67 of the Forest Act is given below, as directed in Government Resolution No. 3527 of the 2nd May 1884 in the Revenue Department :—

No.	Forest Division.	Taken into Court.		Compromised under Section 67 of Forest Act.		Total Number of Cases	
		1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
1	North Thána ...	18	42	39	23	57	65
2	South Thána ...	97	81	31	107	128	188
3	East Khándesh ...	46	23	144	117	190	140
4	West Khándesh ...	44	89	254	195	298	284
5	Násik ...	35	151	564	828	599	979
6	Ahmednagar ...	122	138	1,929	1,805	2,051	1,943
7	Poona ...	230	100	278	463	508	563
8	Sátára ...	42	87	67	54	109	141
9	Sholápur ...	36	88	461	625	497	713
10	Surat ...	24	4	4	10	28	14
11	Panch Maháls ...	53	36	56	78	109	114
Total ...		747	839	3,827	4,305	4,574	5,144

77. The number of compounded cases has increased in the South Thána, East Khándesh, Násik, Poona, Sholápur, Surat, and Panch Maháls divisions, and has decreased in the other 4 divisions, but the greatest number of these cases appears again in the Ahmednagar Division. Mr. Wroughton, the Divisional Forest Officer, Poona, remarks :—

“It will be seen that, as ordered, the power of compounding has been fully availed of. But I regret to point out that the percentage of failures in prosecution cases is steadily increasing: in 1884-85 it was 18·4, in 1885-86 22·1, and now it has fallen to 24. The reason is not far to seek. The system of compounding offences is a great temptation to dishonesty in subordinates, who with ease can state to the accused that the offence has been compounded, and pocket the fine, but even without this it leads to a slipshod way of working up cases. The great object aimed at is to get the accused to confess, and agree to compound. I have seen it recorded by the Magistrate at Junnar that the members of a Panch, who had recorded that the accused confessed his guilt, stated before him that they only did so because it was clearly understood that the offences were to be compounded, and not prosecuted. The cases in question were a series of 6 or 7 in which influential men in the village had been in conspiracy to cut and steal wood from the forest reserve of the village.”

78. No doubt there are disadvantages and objectionable features in the system of compounding forest offences, but a great deal depends upon the way in which the section is worked. The Forest Act ignores intention. It is a forest offence to do anything that is punishable under the Act, or under any rule made under the Act; and a forest offence may be due to ignorance of fact, of law, or regulation, and not to malice. To such cases Section 67 should, the Conservator considers, be invariably applied, for a forest offence of any of these kinds is, from its nature or rather origin, a minor or trivial offence. Then, again, when forest produce of small value, in a forestry as well as marketable point of view, has been wilfully cut and appropriated at a long distance from the nearest Magistrate's Court—some forests are two or more days' journey distant—to take the detected offender, though his offence is neither trivial nor minor, to the Magistrate such a long journey, compelling witnesses to go also, and the forest guard, who detected the offender, to leave his “beat” for days together, is much to be deprecated, and Section 67 of the Forest Act provides a relief to all parties. The Conservator considers that the order requiring the Divisional Forest Officer to be consulted and his order obtained by the forest protective subordinates before a prosecution is entered in the case of a detected offender is not always worked correctly, and that forest prosecutions frequently break down on account of the delay entailed by a long correspondence. Section 52 of the Forest Act requires a report of seizure to be made to the Magistrate having jurisdiction to try the offence when there is reason to believe that a forest offence has been committed, and any property liable to confiscation has been seized. Such report should precede, the Conservator considers, the report to be made to the Divisional Forest Officer, and the latter can then order the case to be prosecuted, or otherwise disposed of.

79. Some detected offenders were released with warnings, as the assessed value of the property seized was considered to be so small as to render prosecution undesirable.

80. The protection of the forests against thefts of timber, &c., is very fair, except in the Thána District. Looking at the very large area of the “Reserved Forests,” the very dense population of the districts in which the forests are, the number of prosecutions that occur in twelve months cannot be considered to be large. The condition that under the Forest Act a pass cannot be required of cart-loads of timber met in transport within forest limits greatly enhances the difficulty of protecting the forest estates, where as in the Thána District private lands growing trees are found to be intermingling with the State forest estates, and stolen wood from Government forests is removed under the name of timber from private lands; and with a numerically insufficient staff of forest guards it is not possible to extend efficient protection on all sides to the standing trees, the property of Government, in forest and other lands. Beats of 1,500 to 2,000 acres in size are too large for a single forest guard in the Thána divisions, where the Government tree property is all scattered about, and innumerable cart tracks traverse the forests in all directions. The forests near bandars in North Thána, such as of the Bassein Taluka, and the forests of Umbargaon on the frontier of

Daman territory are more exposed to plunder ; while in South Thána the forests of the Kalyán, Murbád, Sháhápúr, and Karjat are robbed much more than the forests of the Bhiwndi, Mokháda, and Khálápúr ranges, which are at a distance from the railway line, and heavy thefts are unknown in them. A numerical increase of forest guards is required in these two divisions especially, for upon stipendiaries whose *raison d'être* is forest conservancy, can alone dependence be placed for protecting the Government trees. A son of the police pátíl of Wángni stole a quantity of teak timber from the Kalamboti Kusheoli forests of the Karjat Range, and conveyed it to the Wángni Railway Station under the name of timber from private lands, but he was caught at last, and was undergoing prosecution at the close of the year. With railway stations and with bandars in all directions, at each of which several timber-dealers' yards are located, where wood brought by villagers is purchased without inquiry as to how it has been obtained, and from where it has come, and is sent off to Bombay and Poona at once, and with a population of 90,000 wild tribes, such as Kathkaris, Thákurs, Varlis, whose subsistence is "Wood," and in addition to them at least half of the inhabitants of forest and other villages living upon carrying and carting at the season when agriculture does not demand their time and attention, the difficulties of protection against theft in the absence of a pass system are very great.

81. The number of cattle impounded in the several divisions during the year, under Section 69 of the Forest Act, for trespassing in closed portions of forest reservations was large in the Deccan divisions, as the following table shows :—

No.	Forest Division.	Cows and Bullocks.	Buffa- loes.	Camels.	Horses.	Asses.	Sheep.	Goats.	Total.
1	North Thána ...	172	...	...	...	...	...	...	172
2	South Thána ...	70	4	...	...	...	...	...	74
3	East Khándesh ...	2,520	292	...	14	...	1,853	1,486	6,165
4	West Khándesh .	830	207	8	1	...	3,334	637	5,017
5	Násik ...	5,379	487	...	73	...	1,318	9,359	16,616
6	Ahmednagar ...	25,611	2,115	...	329	175	25,371	5,980	59,581
7	Poona ...	8,684	368	...	200	83	9,770	4,800	23,905
8	Sátára ...	4,403	662	...	70	1	3,366	1,026	9,528
9	Sholápur ...	9,524	1,090	...	88	46	4,982	669	16,399
10	Surat ...	55	33	...	...	...	...	...	88
11	Panch Maháls ...	16	89	...	...	...	332	856	1,293
Total ...		57,264	5,347	8	775	305	50,326	24,813	1,38,838

82. Two beat guards were prosecuted by the Divisional Forest Officer of Ahmednagar for receiving bribes in connection with grazing in forests : one was convicted and punished, and the other acquitted ; and 3 range forest officers, 2 round guards, and 19 beat guards were prosecuted by villagers for illegally impounding cattle for assault, &c., of which number 1 round guard and 4 beat guards were convicted. The round guard and 1 of the 3 beat guards have appealed.

83. 13,860 cattle found trespassing in the forest reserves of the Sholápur Division were released with a first warning, in accordance with the orders contained in Government Resolution No. 2437, dated 21st March 1885.

(C)—FOREST FIRES.

84. Fire-conservancy during the year shows a decided improvement in North Thána : in the Sálsette, Dáhánu, and Umbargaon ranges especially have the results been satisfactory. In Bassein fire traces were burnt as usual by the forest subordinates. In South Thána also is fire-conservancy improving : there were 201 fires reported during the year. In the Khándesh District fires prevailed to a slightly greater extent in the western division ; in the eastern side there were 27 fires—one starting from Holkar's territory adjoining the Yával Sátputás is responsible for burning 12,500 acres despite the efforts made to check and

extinguish it. In 7 cases in this division people who fired the forests were caught: 3 of the 7 cases were compounded, and the other 4 prosecuted, with the result that 1 was acquitted, 1 was fined Rs. 2, 1 received simple imprisonment for 8 days, and another rigorous imprisonment for one month. The area traversed by fire in the Násik Division has been double as much as that burnt last year; 3 ranges—Niphád, Chándvad and Málegaon—were entirely free from fires; the Niphád forests have been closed for some years, and have never been visited by fires. In the Ahmednagar Division 17 fires covered about twice as much ground as they did last year, but the proportion burnt is very small; one range only—Kopargaon—saw no forest fire. In the Sátára Division 2,577 acres only were burnt, and nearly 2,374 of this occurred in one range—Pátan. In the Sholápur Division the forest fires have been on the increase, but only 24 reserves were visited by them, and in the Bársi, Málsiras, and Pandharpur ranges no fires occurred. In the Surat Division a considerable portion of the forests in the Mándvi Range and in the Dángs was traversed by fire. In the Panch Maháls a marked improvement in fire-conservancy is noticeable in all the ranges save Hálol, where the forests round and up the slopes of Pavagad hill were burnt.

85. The following statement shows the forest areas in the different divisions, the portion which has been traversed by fire during the year, and the percentage the latter bears to the former :—

No.	Divisions.			Forest Acreage.	Acreage burned.	Percentage burned.
1	North Thána	...	...	3,73,993	25,803	6·9
2	South Thána	...	...	3,95,803	16,952	4·3
3	East Khándesh	..	...	4,93,101	21,028	4·2
4	West Khándesh	...	...	7,66,237	42,496	5·5
5	Násik	...	...	7,10,949	12,210	1·7
6	Ahmednagar	...	...	5,44,048	3,315	0·6
7	Poona	...	...	4,62,101	1,691	0·3
8	Sátára	...	...	4,22,160	2,577	0·6
9	Sholápur	...	...	1,49,065	2,135	1·4
10	Surat	...	...	6,20,284	33,347	5·3
11	Panch Maháls	...	...	2,06,957	14,809	7·1
Total				51,44,698	1,76,363	3·4

86. On the whole, fire-conservancy in the circle is extremely satisfactory. In the Deccan forests it is practically perfect, and no smaller percentage will be found anywhere. In the Konkan, improvement is visible, and also in the Panch Maháls. The Khándesh forests and the Dángs and Mándvi are about the worst examples, but there are special reasons which make fire-conservancy difficult in these tracts. No special establishments are employed upon fire-conservancy, as no special establishments could in the circumstances of the forests be employed with any advantage. A sustained improvement in all branches of forest conservancy and works ought to be the aim of the Forest Department in India; and this can, as far as the forests of the Northern Circle are concerned, be best secured, both as regards economy and results beneficial to forests, by permanent establishments being taught how to perform the different duties of protection &c., and by inducing villagers to co-operate with forest subordinates in preserving forests against visitations by fire and in extinguishing fires when they do occur: in this view, rewards are given to villagers for the labour provided and the ready assistance tendered by them in burning fire traces and in fighting against and putting out fires. The expenditure in the year on these accounts has amounted to Rs. 470-7-9.

(D)—GRAZING AND FODDER GRASS.

87. The grass and grazing revenues of the forests of the Northern Circle during the period since the famine and since the forests have been established under the Forest Act have shown a steady increase, and this result has been a

marked feature in the history of the forest administration. The following gives a return of the revenue from this source for the past nine years :—

1878-79	...	...	...	...	Rs.	42,629
1879-80	...	...	...	...	"	64,613
1880-81	...	...	...	...	"	1,00,443
1881-82	...	...	...	...	"	1,41,765
1882-83	...	...	...	...	"	1,64,444
1883-84	...	...	...	...	"	1,97,963
1884-85	...	...	...	...	"	2,25,853
1885-86	...	...	...	...	"	2,32,650
1886-87	...	...	...	...	"	2,37,126

88. The revenue from this source compares, as under, with the figures of the previous year :—

No.	Divisions.	1885-86.			1886-87.			Remarks.
		Rs.	s.	p.	Rs.	s.	p.	
1	North Thána	8,041	5	9	9,978	8	0	
2	South Thána	2,755	2	3	2,316	5	8	
3	East Khándesh	22,780	7	0	26,953	7	6	
4	West Khándesh	36,396	5	6	33,411	0	0	
5	Násik	21,004	13	5	37,831	5	0	
6	Ahmednagar	19,012	14	6	27,199	12	11	
7	Poona	61,082	5	0	47,707	11	9	
8	Sátára	36,841	4	6	37,156	8	0	
9	Sholápur	14,867	14	0	5,732	2	9	
10	Surat	1,759	11	6	1,274	15	0	
11	Panch Maháls	8,107	10	0	7,564	1	0	
Total		2,32,649	13	5	2,37,125	13	7	

89. The rules contained in Government Resolution No. 7467, dated 15th September 1885, Revenue Department, given in paragraph 90 of the administration report of last year, were worked up to as far as possible. In the Thána divisions there is very little restriction as to grazing or the cutting of grass by forest villagers; professional graziers from above Gháts and from Bombay who come into the Thána forests to graze their cattle are charged fees, and the grass of some specially valuable grass-producing forest tracts, where it has hitherto been customary to do so, is sold by auction. In the North Thána Division the revenue from this source has continued to increase, and for the year under report it appears at Rs. 9,978 against Rs. 8,041 of the previous year. There is a wealth of grass in the Thána forests: during the great Deccan famine the Conservator of Forests personally directed the pressing in bales of hay obtained from the Thána forests, which was then sent up by railway to the Sholápur Districts to feed cattle employed in the circulation of grain conveyed from railway stations to distant famine-stricken villages, and in this way human life was saved. But the grass crop in the forests is much wasted, the villagers take what they want for the rab of their fields, and the residue gets burnt, until at the end of the hot weather the price of grass goes up to Rs. 10 and 13 per 1,000 bundles. In Khándesh free grazing is allowed in the North Tápti Privilege Code, and Dhulia and Sindkheda are the only ranges in which fees are paid in the West Khándesh Division, but the revenue has increased here, as well as in the other division, where free grazing does not prevail. In the Násik Division the sale of grass declined from Rs. 9,505 to Rs. 9,032; but, on the other hand, fees produced an increased revenue, free grazing was given to all village cattle, and only outside cattle belonging to professional graziers paid fees. The auction-sales of grass in the Ahmednagar Forest Division produced a higher revenue this year, and the fees also exceeded the collections, under this head, of the year before, thus evidencing that the villagers who were very hostile to the fee system at its introduction are coming round. Grazing was permitted from 1st June to 31st March in this division. In the Poona Division the receipts have fallen considerably, a very large proportion of the forest area was open to free grazing, and the Divisional Forest Officer reports that Dhangars and others take advantage of the free-grazing areas to evade payment of fees on their cattle. The value of the

grass supplied to the Commissariat Department in this Division, for which no credit by book adjustment is received, amounts to Rs. 13,555, and the value of free grazing conceded to village cattle is assessed at Rs. 41,500. Grazing working plans, in accordance with the orders of Government contained in the several resolutions upon demarcations and settlements of the forests of different talukás in the Sátára Collectorate, were compiled by the Divisional Forest Officer and sanctioned by the Collector. The total revenue for the year was greater than for the preceding year. The receipts were collected by the village officers, to whom a percentage in remuneration of their work has to be paid. New rules were passed in Government Resolution No. 1511 of the 11th March 1887 for the collection of forest revenue by village officers and for the payment of remuneration to them, which provide as under :—

I.—When the agency of village officers is in future employed in the collection of forest revenue they shall be remunerated by a deduction from the gross revenue collected at the time it is made over by them to forest officers, and at no other time.

Sums paid for grass reserves, &c., and not passing necessarily through the village books should not carry remuneration to village officers.

II.—The rate of remuneration payable shall be 6 pies in the rupee to the pátíl and 9 pies in the rupee to the kulkarni. In calculating the amount of remuneration due to any village officer, fractions of a rupee above eight annas shall be regarded as one rupee ; all others shall be neglected.

III.—Village officers shall issue passes or grant receipts for revenue received from pass-books (in counterfoil, each leaf of which shall be numbered consecutively,) supplied to them by the Forest Department after entering the particulars in the counterfoils. When the passes are issued, the village officers shall take the signature of the persons to whom passes are issued on the counterfoils.

IV.—The collections made by the village officer shall be accounted for to the forest officer when on his rounds, or when the village officer calls on the forest officer for the necessary chalans. The village officer may accumulate his collections for a month, but not for a longer time. The forest officer shall receive the money due from the village officer, or give to the village officer a chalan for the full amount entered in the counterfoils, less the remuneration due to the village officer.

V.—The forest officer, on receiving the amount or giving the chalan, shall obtain a receipt from the village officer for the remuneration deducted, in the following form:—

Receipt for remuneration due for the collection of Forest Revenue by the Officers of
village , *Táluka* , *District* , *from*
 188 to 188 .

Name of Village.	Date of Collection.	Gross Amount collected.	REMUNERATION DUE.		Net Amount to be paid into Treasury.	Remarks.
			Rate.	Amount.		

Received Rs.

Date

Pátíl.

Received Rs.

Kulkarni.

Date

VI.—If in any village any difficulty be felt in obtaining the countersignature of the officers of the Forest Department, the Conservator may, after satisfying himself of the difficulty, authorise the Treasury or Sub-Treasury Officer concerned to receive forest revenue collected by village officers without the countersignature on the chalan by officers of the Forest Department. The officer receiving the money should see that the calculation of the remuneration is correct, and should send the chalan and the receipt for remuneration to the Range Forest Officer, in whose accounts the receipts of such village are accounted for.

VII.—In the accounts kept by the Forest Department the gross amount of revenue collected shall be credited, and the remuneration paid be debited, to the appropriate heads of account.

VIII.—At the end of each month the Divisional Forest Officer shall, as prescribed in Section 143 of the Forest Code, draw a cheque for the amount of remuneration paid by himself and his subordinates during the month, to be credited at the Treasury by transfer to Forest Remittances.

IX.—When revenue collected by village officers is refunded, the remuneration paid to the village officers for its collection need not be recovered, unless the village officers are to blame in collecting it.

X.—The counterfoils of all exhausted pass-books shall be made over by the village officers to the Forest Department for record in that department.

XI.—Forest officers shall, occasionally, on their rounds, collect, if possible, passes granted by village officers, and compare them with the corresponding counterfoils.

90. The grazing fees in the Sholápur Division have not produced so large a revenue as was anticipated. Cattle were admitted throughout the forests of the Surat Division on the fee system. In the Panch Mahals Division Rs. 2,876-7-0 were realised by sale of grass for cutting and removal, and Rs. 4,687-10-0 were obtained by the issue of grazing permits to professional graziers and cattle-breeders throughout the district. No fees of any kind were taken from ordinary rayats on account of grazing throughout the year. Free grazing in forests causes loss of revenue, both directly and indirectly, for the value of the pasturage enjoyed by the privileged cattle is lost, and then a number of non-privileged cattle evade payment of fees under cover of free cattle. Under Rule 7 of the grazing rules forest guards are prohibited from interfering with the herds, except with cattle trespassing into closed areas, and consequently the check and supervision over cattle-grazing in the portions of the forests opened to grazing must be practically *nil*, for village officers have their own professional occupations to claim their time and attention, the pátíl as well as the kulkarni has his fields and his other business to look after, and cannot afford the time and attention, even if he possessed the inclination, to go into the open forest compartments daily and hourly to ascertain whether irregularity with reference to cattle-feeding was going on. The village officer may possibly be able to know at sight all the privileged cattle of the village and to recognize cattle that ought to pay fees, but this is extremely doubtful : any how the forest guard is not so well acquainted with the agricultural cattle of the villagers as to be able to distinguish them and to detect trespassers in the midst of numbers of free cattle ; and, unless he is allowed to interfere with the herds, to require the production of free permits, and fee permits, illicit grazing must prevail. It is certainly the duty of the Forest Department, seeing what are the circumstances surrounding our forest reservations, to provide the largest extent of pasturage that can with proper regard to the interests of forestry be provided, and an enormous area can with comparative safety be opened to grazing in all the divisions so long as a limitation of the number of cattle to be entered upon particular areas is enforced, and a grazing season is observed. It has been proved conclusively that the improvement of the grass crop upon the hills of the Deccan, in quality as well as yield, is the natural consequence of the reboisement of the hills, and that a good and abundant growth of grass can in no other way be secured than by bringing in the first place soil and moisture upon the slopes.

(E)—FENCING.

91. In the Máhím Range of the North Thána Division the wire fencing round the Wankas, Kamare, and Khaire reserves was put into efficient condition at a cost of Rs. 879. In the Sálsette Range the forests of Persick and Khandevli had euphorbia planted upon their lower boundaries : 2,267 and 1,040 running feet of hedge were thus erected, costing Rs. 22-3-0 and 19-4-0 respectively. In the Ahmednagar Division 25,163 running feet of hedging of sabri with bámbus planted in places on the line were put down upon the boundaries of reserves in 9 ranges at a cost of Rs. 144-7-3 ; and in the Sátára Division in 7 ranges 50,015 feet of fencing has been planted at a cost of Rs. 154-11-9. The Gundeva Reserved Forest in the Surat Division has had euphorbia cuttings put down upon its boundaries.

(F)—NATURAL REPRODUCTION.

92. In the Konkan the spontaneous growth of vegetation is very vigorous. In the Khairni Patte reserves of the Salsette Táluka of North Thána, khair seedlings are very noticeable in all directions ; and also teak saplings, which have grown up within the last few years, are very general. The Divisional Forest Officer, East Khándesh, has observed a fact often brought to notice, that although nearly all the seedlings which naturally appear during the rains apparently wither and die when three or four months old, so that very few are to be seen in the hot weather, still their roots survive and send up fresh shoots in the next rains. In many places he has seen plants two or three years old which their freshly appearance indicate to have grown up in this way, though hardly any first year seedlings were visible. The Divisional Forest Officer, Násik, reports :—

“The general improvement in the state of the hills and lands in our charge has been commented upon very frequently by many people whom I have come across in my travels during the past season. This is very noticeable in the forests of the Yeola, Nándgaon, and Málegaon ranges ; again in the Ghát forests and in those below the Gháts the forests are carpeted with a strong growth of seedlings, the seeds of which Nature has herself sown. In the Peint Range the difference between the growth of recent and of former years is most marked. The latter consists of trees hollow, crooked ; and the former of beautiful well-grown poles.”

93. The Divisional Forest Officer of Ahmednagar reports of the visible increase of forest growth in all the portions of the hill reservations which are closed against cattle, and that he has received testimony of the village officers as to the increase of the forest vegetation on the hill slopes of the range of hills bordering the Nagar Táluka on the north. Mr. Wroughton, the Divisional Forest Officer of Poona, reports, with the Deccan system of broad-cast plantation by forest guards it is difficult to distinguish between natural and artificial reproduction.

“I may record, however, that from many independent sources I have had independent testimony to the improvement of the reserves of this division. I may mention, amongst others, two Native members of the Forest Commission who expressed to me their astonishment at the improvement of the vegetation on the Khandála hills. Mr. Sheppard, Commissioner, N. D., who noticed to me the improvement of the growth on the Sakur Pathar. A military officer, who remarked on the improved look of the hills between Poona and Purandhar. The villagers of Lohogad informed me that, owing to the spreading of forest growth on the hill slopes, the difficulty of turning out tigers and other wild animals for sportsmen from Poona and Bombay to shoot in their village had greatly increased. In fact, there can be no doubt of the very marked improvement everywhere in the past few years.”

94. The Divisional Forest Officer, Sholápur reports that the bare hills in many places are gradually beginning to show a little vegetation of tarvad bushes (*Cassia auriculata*) and thorns, *but which all help the work of disintegrating the soil and preparing the way for timber trees.* The hills in the Bársi Táluka show in many places a steadily increasing vegetation climbing up their slopes on the least exposed faces, and in a few years' time these hills will present a very different appearance. The Divisional Forest Officer, Panch Maháls, states that natural reproduction is fair, but would be excellent if grazing were restricted, which has greatly injured the forests of the Godhra Táluka in the past.

95. There is no longer room for doubt that the Forest Department can by simple and inexpensive measures restore timber to all the bare hills of the Deccan and convert them into reservoirs for impounding the rain that falls upon the hills. That these hills will grow timber of large size, is evidenced by the presence of sacred groves which have remained here and there, superstition having guarded them against the desolating axe. But there is a new difficulty appearing in the path of reboisement, viz., a demand for thorns for fencing purposes, and claims made by some Revenue Officers to have the power of granting thorns to applicants from the hill sides. To fence in an acre field with thorns necessitates the stripping of several acres of semi-denuded hills undergoing reboisement, while the thorns dry up and rot away soon after they are put down, high winds sweeping over the Deccan plains blow them away, they are appropriated for firewood, and the dry thorn fencing of a field has to be replenished before the crop it was intended to protect has been harvested. The thorns in reservations under treatment for reboisement create soil, they impound the rainfall, they nurse seedlings to produce timber and firewood, and they have a climatic value upon the

hill sides,—all these properties are beneficial to agriculture, and they serve in the highest degree the interests of cultivation when they are to be found growing full of vigorous life upon the drainage slopes on the higher levels of the country. There are forests from which the removal of thorns does good, where the thorns have worked their capable purpose, and are required to give room to better growth.

(G)—ARTIFICIAL REPRODUCTION.

96. In the North Thána Division plantations are made upon open spaces inside the forest reservations. Lands which having been under cultivation at one time have been acquired for forests in virtue of their position inside forest reserves. 105 acres were newly planted during the year, which with the 2,038 acres of similar plantation at the close of last year makes 2,143 acres in all. Slips of the bhendi tree (*Thespesia populnea*) have been put down near the sea-coast, and seedlings of all kinds brought from neighbouring forests, where they had naturally come up, have been planted out both by forest guards and by hired labour. In the South Thána Division 271 acres were thus planted during the year. The hill reserves in Khándesh have been broad-casted, and on the plains lands have been ploughed and sown, and in places pits have been made and seeds sown in them. In the Násik Division the plantations are reported to be growing up so vigorously as to have become coverts for game of all sorts, which largely resorts to them. In the Dongargaon plantation in the Ahmednagar Division two dams, which were built across a stream to impound water for irrigating the area where exotics are grown and cultural experiments made, were unfortunately breached by the rain in the month of May, which came down suddenly before the masonry had set, and were able to bear the strain. The following table shows the plantation work carried out in one division—Ahmednagar—and is a sample of what is being done. 102½ khandis of seeds were collected by the forest guards.

No.	Ranges.	BY HIRED LABOUR.				BY FOREST GUARDS.			
		Plough- ing whole Area.	Ploughing at 12 feet distance.	Pits at 5 feet distances.	Cost.	Area.	Pits.	Trans- plants.	Broad cast.
		Acres.	Acres.	Acres.	Rs. a. p.				
1	Nagar ...	12	...	85½	123 10 6	59	11,200	...	138
2	Párner ...	4½	...	...	57 2 3	48	16,000	1,000	330
3	Shrigonda ...	...	74½	...	40 11 0	416½	15,850	1,950	...
4	Karjat ...	21½	...	41½	44 14 0	10	9,200	2,675	335
5	Jámkhed ...	...	80½	48½	35 0 0	46½	11,000	2,200	2,393½
6	Shevgaon ...	...	...	24	10 0 0	490	10,600	2,200	193
7	Nevása ...	3	...	...	49 12 0	10	5,000	...	200
8	Ráhuri ...	1	...	...	8 4 0	11	7,200	...	2,750
9	Kopargaon ...	...	...	86½	48 11 3	14	7,000	1,400	210
10	Sangamner ...	...	15	40	18 13 3	223	19,005	20	3,902
				Broad cast.					
11	Akola ...	...	...	263½	24 12 0	95	24,600	5,025	16,036
	Total ...	41½	169½	589½	461 10 3	1,423	1,37,255	16,470	26,487½

97. In the Poona Division the forest guards made 35,625 pits, and sowed seeds in them upon the hill sides; the seed of the hirda tree (*Terminalia chebula*) was sown to a large extent, every forest guard sowing 100 pits. By hired labour 1,999½ acres were ploughed and sown, and 89,577 acres were pitted over and sown at a total cost of Rs. 977-3-0.

98. 784 acres of fresh ground were planted in the Sátára Division by hired labour in 15 forest reserves situated in 9 ranges, and 19,275 acres were sown broadcast and otherwise by forest guards. 7,933 bámbus were planted, out of which 20 per cent. were said to be surviving at the end of the hot weather, and the number of seedlings alone is given at 3,25,495; but reliance cannot be placed upon this enumeration, and the Conservator is of opinion that statements of the kinds are generally inaccurate, and should be avoided. Teak transplants

put down upon the Mahábaleshvar plateau have not succeeded. In the Sholápur Division 1,001 $\frac{9}{40}$ acres were treated by hired labour under the systems of full-ploughing, furrow-ploughing, pitting or dibbling, drilling. The cost of carriage of seeds from other parts of the country amounted to Rs. 225, and the cost of labour to Rs. 1,141-14-0. In addition thereto, 85 forest guards planted in pits over 181 acres and broad-casted 4,521 acres. No extensive plantations are to be found in the two Gujarát divisions. In the Surat Division 1,302 acres were planted up inside the reserves at a cost of about 3 $\frac{1}{2}$ annas the acre, and in the Panch Maháls 148 acres of blanks were planted by forest guards.

99. The results of artificial plantations are not everywhere the same. In places where the soil is good, and the rainfall seasonable, success has been highly satisfactory, while in other places failure has to be chronicled; but the success or otherwise of such plantation works can only be realised after a period of years, and is much dependent upon the treatment the lands receive subsequently to their planting.

100. There is nothing interesting to mention regarding experiments with *exotics*.

101. The divi-divi, carob, *Pithecolobium saman*, varieties of eucalypti, *Grevillea robusta*, mahogany trees, &c., which had established themselves in former years, are growing well. Some mahogany seed received during the year was experimented with; and while the quantity sown in some divisions germinated only to die; in others—Násik-for choice—seedlings are doing well. The total expenditure of the circle under Plantations A VIII (d) amounts to Rs. 7,461-3-0.

(H)—COMMUNICATIONS AND BUILDINGS.

(a)—ROADS AND BRIDGES.

102. There are several reasons why no great works by the Forest Department in the construction of roads and bridges have to be recorded. In the first place, this Presidency has, since it has come under British rule, been opened out in all directions by roads, new roads have been constructed from year to year by the Public Works Department and the Local Funds Department to feed railway stations, bandars of export to connect centres of trade and to facilitate commerce; and, possibly, in the matter of roads the Bombay Presidency is in the forefront of such civilization in the British Empire.

103. Then, again, cart tracks abound in all directions, traversing forests and making their remotest spots accessible. Of course there are forests and portions of forests not yet approachable by wheeled carriage, but the time for remedying this defect has still to come. The existing cart tracks serve all ordinary purposes of forest exploitation; they might be converted into metalled roads at considerable cost, but the advantage of this being done upon any extended scale is questionable, for the cost of annual repairs in the country of a heavy rainfall would be a considerable item in the budget, while there might not be a proportionate increase of receipts by the improved communication. Further, one-half of the surplus revenue of the Forest Department is given to the Provincial Services budget, at the expense of which many miles of roads, which are of use to the Forest Department, are constructed by officers of the Public Works Department. Lastly, Divisional Forest Officers have their attention and time fully employed in managing the ordinary business of their forests without undertaking work which is not altogether in the regular groove of their professional education or business. And, however strong their desire may be to construct roads, the fact remains that forest budget sanctions are not generally lavish of funds; indeed, it is only with great care and supervision that the expenditure incidental to the protection of the forests, to organization, to plantations, to felling and exploitation of material to produce revenue is kept within the sanctioned limits.

104. In the Thána Division the road leading up to Tungár hill has been repaired departmentally, and a cart road has been made to the forest bungalow at Párol, in the Bassein Range. And a road, 1 mile and 1,220 feet in length, over the Satevli Khind has been constructed by the Public Works Department, at the instance of the forest officers, to open out the forests of the south-western portion of the Bassein Range to a railway station, to bandars of export, and to

coast villages; and a survey has been made by the Executive Engineer of Thána, also at the instance of forest officers, to carry a road from Váda, through the Mokháda Peta up the Western Gháts, into the Igatpuri Táluka of the Násik Collectorate. This road will traverse rich and valuable forests. In South Thána the road from Kalyán Station towards the Málsej Ghát was under construction by the Public Works Department, and will be of use for the carriage of forest produce, and a project is under discussion for extending the Dáhanu-Jawhár road to Mokháda. In the Ahmednagar Division the Jaolé-Báleshvar forest road was repaired. In the Dángs Rs. 361-15-7 were expended upon road repairs. In the Sátára Division Rs. 211-4-6 were expended in rasing off the difficult places upon a forest cart track from Karád to Kálgaon, and making it a good road for timber-laden carts.

(b)—HOUSES AND BUILDINGS.

105. The construction of office accommodation for range forest officers attached to the Mámlatdárs' kacheris has been carried on year after year by the Public Works Department, at the cost of the Provincial Services budget, at the instance of the Forest Department. During the year of report, offices have been provided for 20 ranges, and the following table shows the progress made and remaining to be made in the several divisions at the end of the year :—

No.	Division.	Number of Ranges.	Ranges provided with offices.	Ranges remaining to be provided.
1	North Thána	6	5	1
2	South Thána	8	8	...
3	East Khándesh	13	8	5
4	West Khándesh	10	7	3
5	Násik	14	5	9
6	Ahmednagar	11	8	3
7	Poona	11	6	5
8	Sátára	14	10	4
9	Sholápur	7	3	4
10	Surat	6	2	4
11	Panch Maháls	5	5	...
Total ...		105	67	38

106. Houses have been built for forest guards in several directions, in order to provide them with accommodation at Government expense, and to render them independent of villagers for lodging. This scheme would be more effective, than it can be, if the forest guards' beats were small enough to allow the men to visit their forests and return to their huts at night, but unfortunately such is not the case. Taking the Kalyán Range of South Thána as an example, it will be found that this range is divided into 28 beats, and the number of villages contained in a beat are 2, 4, 5, 6, 7, 8, 10, 11, 13, 17, 25, 29, 45 in respective cases. A forest station has 4 rooms and a forest post has 3 rooms, which are intended for the accommodation of round guards and the range forest officers on tour. In the North Thána Division 38 forest stations and 82 forest posts were built during the year, and in South Thána 62 forest posts at a cost of Rs. 620. In the Ahmednagar Division a forest house for accommodating the forest guards and storing hirda was built in the Panchnai forest at a cost of Rs. 86-9-6. In the Panch Maháls 17 forest stations were built, consisting of 4 huts, 14' x 14', placed at the four corners of an enclosure 100 feet square. Náka depót houses and forest rest-houses in different divisions have been repaired as required.

107. The expenditure upon communications and buildings for the year amounts to Rs. 5,859-4-9 :—

			Rs.	a.	p.
a	Roads and bridges	...	597	11	2
b	Houses	...	5,254	9	7
c	Other works	...	7	0	0

(I)—CUTTING OF CREEPERS, REMOVAL OF INFERIOR SPECIES,
AND EARLY THINNINGS.

108. The eradication of prickly pear (*Opuntia dillenii*) is carried on by forest guards in the bábul reserves in the plains of the Deccan, where it is of fresh appearance and in small quantities. But in several of the reserves the prickly pear has grown and extended so in past years that it has become the principal species, and its eradication is a very desirable performance. Upwards of Rs. 400 were expended in the Poona Division in cutting it down and destroying it from the Gozubari and other reserves. In the same way the prickly pear was removed to a certain extent from the Khandála and Tásgaon Reserved Forests of the Sátára Division at a cost of Rs. 124-3-0, and a small expenditure was likewise incurred in the Sholápur Division for like purpose.

CHAPTER IV.

YIELD AND WORKING.

1.—DEPARTMENTAL OPERATIONS.

(a)—TIMBER.

North Thána Division.

109. The timber felled departmentally and sold in lump, the produce of each forest, separately by auction or tender to the trade appears in the following statement:—

No.	Range.	Number of Trees felled.	YIELD.		Cost.	Receipts.			Remarks.
			Timber Pieces.	Fire- wood (Carts).		Rs.	a.	p.	
Teak Fellings.						Rs.	a.	p.	
1	Sálsette	3,000	4,694	298	1,142 7 10	5,835	4	0	
2	Bassein	7,751	12,361	825	1,619 2 4	9,692	15	3	
3	Váda ... ..	...	...	...	.....	.....			
4	Máhim	11,457	16,148	1,875	2,222 7 2	10,204	8	0	
5	Dáhánu	18,710	24,837	2,723	2,725 8 0	21,767	14	0	
6	Umbargaon	7,154	8,845	531	1,724 11 0	7,847	4	6	
Total ...		48,072	66,885	6,252	9,434 4 4	55,347	13	9	
Ain, Khair, Tivas, &c., Fellings.									
1	Bassein	1,500	2,275	206	408 14 0	1,000	0	0	
2	Máhim	4,000	4,599	440	767 12 9	4,445	0	0	
3	Dáhánu	2,143	1,947	412	626 12 3	2,726	0	0	
Total ...		7,643	8,821	1,052	1,803 7 0	8,171	0	0	

110. Firewood has been included in the above, as it consisted of the crown branches, loppings, and stumps of the timber. About 3,500 cart-loads of it were sold to villagers residing on the coast for home consumption at 8 annas a cart-load, and it was taken away on permits. The villagers appreciate this system of sale, and it has advantages for the department, in so far as it keeps people out of the forests who would otherwise be searching for dead-wood, and would be aiding in its manufacture.

111. Retail auction sales of timber, made with a view of placing facilities in the way of villagers for supplying their wants in building and other material, were not generally successful. At some of the sales the attendance of purchasers was good, and the bidding brisk, but at others, in the Máhim and Dáhánu ranges, there was no demand at all; and the material had to be sold subsequently for the trade.

112. The following is an abstract of the quantities of timber sold and of the financial results :—

No.	Ranges.	Number of Coupes.	TIMBER.		Cost.	Receipts.	Remarks.
			Teak.	Jungle-wood.			
					Rs. a. p.	Rs. a. p.	
1	Sálsette ...	3	4,383	284	1,142 7 10	5,589 4 0	
2	Bassein ...	3	8,117	...	1,091 14 4	6,190 15 3	
3	Máhim ...	5	9,949	2,049	1,663 14 11	8,107 0 0	All but 386 pieces sold in lump.
4	Dáhanu ...	3	6,623	...	1,036 1 7	3,432 14 0	Do. 556 do.
5	Umbargaon ...	3	8,845	...	1,724 11 0	9,545 2 6	1,414 pieces sold in lump for Rs. 2,255.
	Total ...	17	37,917	2,333	6,659 1 8	32,865 3 9	

Firewood fellings were made to the extent shown :—

No.	Ranges.	Number of Coupes.	Number of Trees.	YIELD.		Cost.	Receipts.	Remarks.
				Timber Pieces.	Fire-wood.			
						Rs. a. p.	Rs. a. p.	
1	Sálsette ...	1	4,321	78	2,735	1,699 0 6	1,710 0 0	
2	Bassein ...	4	20,596	547	8,111	3,200 11 2	3,916 4 0	
3	Máhim ...	4	6,380	...	2,051	957 15 6	2,822 0 0	
4	Dáhanu ...	2	8,423	...	2,340	495 0 0	1,601 4 0	
	Total ...	11	39,720	625	15,237	6,352 11 2	10,049 8 0	

113. All the firewood in the Bassein Range was felled for supply to sugar-boilers; the material was brought outside the coupes and stacked, and then the cartmen were allowed to remove it on permits. The sugar-boilers removed all the best wood in 1,285 large and 97 small carts containing about 3,500 khandis, and then left the remainder, which they would not take, to be sold to timber-dealers. These retail sales of firewood are very unprofitable; they give a great deal of trouble, and interfere seriously with private trade. The net profit in Sálsette has amounted to Rs. 10-15-6 and in Bassein to Rs. 715-8-10, but the cost of supervision has not been taken into account.

South Thána Division.

114. The sales were made by auction or tender in lump and in auction by lots. The prices realized were very poor compared with former years. The following is the financial result :—

No.	Ranges.	Number of Trees.	Cost.	Sale Results.		Remarks.
				Rs. a. p.	Rs. a. p.	
1	Bhiwndi ...	8,000	1,400 0 0	5,546 0 0		
2	Sháhápúr...	16,000	2,927 0 0	12,193 0 0		
3	Kinowli ...	8,000	1,343 0 0	3,979 0 0		
4	Mokháda...	4,000	820 0 0	3,109 0 0		
5	Kalyán ...	12,000	1,766 0 0	4,754 0 0		
6	Murbád ...	12,000	1,782 0 0	3,972 0 0		
7	Karjat ...	12,000	1,815 0 0	6,093 0 0		
8	Khalápúr...	8,000	1,500 0 0	2,453 0 0		
	Total ...	80,000	13,353 0 0	42,099 0 0		4,000 trees remained unsold.

115. The rates of cost of felling, bringing out to the forest depôt, and stacking varied from Rs. 14-11-0 to Rs. 20-8-0 per 100 trees, and the selling rates from Rs. 30 to Rs. 77 per 100 trees. The branches and stumps of the above trees produced 8,798 khandis of firewood locally known as kita and 4,002 khandis of vishtár (big-junks), and these sold for Rs. 8,970.

East Khándesh Division.

No.	Ranges.	TIMBER PIECES.			Cost.	Receipts.
		Teak.	Jungle-wood.	Firewood.		
				Khds.	Rs. a. p.	Rs. a. p.
1	Chopda	15,014	...	...	453 0 0	2,561 0 0
2	Jámner	10,000	...	...	302 0 0	2,927 12 0
3	Yával	5,050	...	...	75 12 0	1,111 0 0
4	Ráver	...	500	...	18 12 0	152 0 0
5	Bhusával	...	...	1,500	401 7 6	1,250 0 0
6	Chálisgaon	...	...	990	301 14 0	306 0 0
7	Edalabad	...	...	2,000	625 0 0	1,000 0 0
8	Jalgaon	...	...	1,000	322 11 6	1,155 0 0
9	Ráver	...	...	500	145 2 0	405 0 0
	Total	30,064	500	5,990	2,645 11 0	10,867 12 0

Prices were not good.

West Khándesh Division.

No.	Ranges.	Number of Trees.	YIELD.		Cost.	Receipts.	Remarks.
			Timber Pieces.	Fire-wood.			
					Rs. a. p.	Rs. a. p.	
1	Nandurbár ...	2,281	5,003	...	180 5 6	1,054 8 0	434 pieces unsold.
2	Navápur ...	8,160	15,205	...	719 0 0	4,443 13 7	
3	Nizámpur ...	421	2,160	...	49 15 0	186 8 0	
4	Pimpalner ...	101	1,000	10	30 0 0	493 10 0	230 khandis unsold. 650 pieces and 494 khandis unsold. 300 khandis unsold.
5	Sháháda... ..	48,348	4,065	807	765 1 0	1,730 0 0	
6	Shirpur... ..	7,300	10,000	494	445 8 9	2,095 0 0	
7	Dhulia	4,132	...	2,000	500 0 0	2,610 0 0	
8	Sindkheda ...	1,261	...	300	72 3 0	.....	
	Total	72,004	37,433	3,611	2,762 1 3	12,613 7 7	

116. The timber was composed of teak, tivas, and junglewood. There were 12,621 pieces in stock at the commencement of the year; 10,991 of these were sold during the year. It will be seen that a large quantity of firewood remained unsold; but the 2,554 khandis, which were on hand at the commencement of the year, sold for Rs. 709-2-0. The concession of very liberal privileges of cutting and taking free of charge comes in the way of sales. So long as people can obtain their supplies of timber and firewood free direct from the forests, or second hand at nominal cost, they will never resort to the forest and other departmental depôts to buy.

117. In the Násik Division the departmental operations were very extensive, as below stated :—

No.	Range.	YIELD.		Cost.	Receipts.	Remarks.
		Timber Pieces.	Firewood.			
				Rs. a. p.	Rs. a. p.	
1	Násik ...	139	800	204 7 6	386 0 0	
2	Igatpuri ...	10,770	173½	361 10 10	2,535 0 0	
3	Sinnar ...	3,104	70	104 14 6	849 10 0	
4	Dindori ...	32,800	541	1,209 15 7	9,668 5 6	
5	Niphád ...	...	337½	93 1 6	281 12 6	
6	Chándvad ...	5,206	...	107 12 0	2,218 7 0	
7	Báglán ...	6,532	...	183 11 10	1,183 12 0	
8	Kalvan ...	20,690	1	549 13 9	3,217 14 0	
9	Peint ...	51,198	...	3,184 14 1	17,876 10 11	
10	Nándgaon ...	...	509	127 4 0	572 10 0	
11	Málegaon ...	654	506	136 2 6	412 13 9	
	Total ...	1,31,093	2,938	6,263 12 1	39,202 15 8	

118. The quantity of timber exploited was not so much as of last year, but more firewood was put into the market. In the Násik, Dindori, Niphád, Málegaon, and Nándgaon ranges, where there is a demand for firewood, special fellings of it were made.

119. Teak trees in the Akola and Sangamner forests of the Ahmednagar Division were felled in accordance with the provisions of working plan which had been made by Mr. Hight, Deputy Conservator of Forests. The timber is crooked and small, owing to the fact that in former years the trees used to be lopped or pruned, and all the other kinds of trees were cut away, protection being restricted to one tree, the teak, only. Jambul trees (*Jambosa salicifolia*) were felled in the "bets" or clumps on the banks of rivers; sales were not good. There were on hand, at the commencement of the year, 8,734 teak rafters and 554 jambul rafters. The cost of teak felling of the year was at the rate of Rs. 2-1-0 per 100 rafters, and the selling rate came to Rs. 16-7-0 per 100. Jambul fellings cost Rs. 2 per 100, and the receipts averaged Rs. 7 per 100. 1,188 teak rafters with 22 khandis 21 maunds and 7 lbs. of teak firewood and 4,575 jambul rafters with 15 khandis 10 maunds and 7 lbs. of jambul firewood remained unsold at the end of the year. Firewood fellings were made in the bábul reserves in the champaign country, the trees selected being dead, uprooted by floods, and blown down. A sudden flood swept 50 khandis of firewood out of the Johárápúr Reserve in January. The cost of the firewood fellings have averaged 3 annas and 9 pies the khandi, and the receipts Rs. 1-12-0. The following table is an abstract of the operations:—

No.	Ranges.	No. of Coupes.	Number of trees felled.	TIMBER PIECES.		Firewood.	Cost.	Receipts.
				Teak.	Jambul.			
						K. m. lbs.	Rs. a. p.	Rs. a. p.
1	Akola ...	15	13,910	29,922	10,858	293 22 14	823 14 0	4,617 4 10
2	Sangamner ...	4	8,112	15,764	1,980	539 10 18	380 9 9	3,314 2 3
3	Nagar ...	6	167	...	...	83 2 4	28 8 0	246 14 0
4	Shrigonda ...	3	360	...	...	100 18 7	21 0 6	358 0 0
5	Shevgaon ...	1	71	...	...	93 24 0	23 1 0	42 14 0
6	Nevása ...	1	85	...	...	29 23 0	5 0 0	25 15 0
7	Kopargaon ...	3	152	...	...	343 18 0	66 9 3	384 9 9
	Total ...	33	22,857	45,686	12,838	1,484 6 15	1,348 10 6	8,989 11 10

120. In the Poona Division the felling operations are distributed widely over the forests, and the material is sold in small lots to villagers, who are the principal

attendants of the auctions. In the Junnar Range, 5,000 teak pieces instead of 5,000 trees were felled. The extent of the operations and their financial condition will be seen from the following figures :—

No.	Range.	TREES FELLED.		YIELD.		Cost.	Receipts.
		Teak.	Jungle-wood.	Pieces.	Firewood.		
						Rs. a. p.	Rs. a. p.
1	Junnar ...	1,694	439	4,980	235	146 12 9	2,448 2 6
2	Indápur ...	...	141	...	283	35 14 0	588 14 0
3	Khed ...	8,036	197	25,263	994	866 6 6	6,324 0 0
4	Ambegaon ...	5,000	300	20,209	193	358 5 3	6,817 12 0
5	Sirúr ...	...	1,619	...	1,018	184 9 6	2,441 8 0
6	Purandhar ...	3,000	11,000	8,170	578	272 14 3	2,091 12 0
7	Bhimthadi ...	...	1,052	...	1,119	187 12 3	3,263 0 0
8	Báramati ...	...	340	...	530	56 9 9	1,294 1 0
9	Haveli ...	5,101	1,151	25,303	1,952	764 10 0	6,397 1 0
10	Mulshi ...	...	...	...	...	.....	.....
11	Mával ...	828	294	3,899	118	108 10 9	970 3 0
	Total ...	23,659	16,533	87,824	7,020	2,982 9 0	32,636 5 6

121. In the Sátára Division, in the same way, fellings were made in all the ranges and the material was sold departmentally in lots by public competition :—

No.	Ranges.	YIELD.			Cost.	Receipts.
		Teak.	Jungle-wood.	Firewood.		
					Rs. a. p.	Rs. a. p.
1	Pátan ...	22,714	5,988	550½	1,115 15 0	7,184 9 0
2	Karád ...	12,020	...	700	499 15 3	3,728 2 0
3	Koregaon ...	1,860	...	110½	137 0 0	546 0 0
4	Shirála ...	9,240	...	115½	174 9 9	1,763 11 3
5	Khatáv ...	17	106	22	13 6 0	56 0 0
6	Mahábaleshvar ...	...	3,402	1,189½	869 15 3	1,725 15 5
7	Tásgaon ...	...	762	185½	206 1 0	840 7 0
8	Khandála ...	...	...	53	23 6 6	67 2 0
	Total ...	45,851	10,258	2,925½	3,040 4 9	15,911 14 8

122. 12 khandis and 77 maunds of charcoal made at a cost of Rs. 36 sold for Rs. 96, and 19,000 bámbus cut and stacked at a cost of Rs. 126-11-0 sold for Rs. 196-9-6. Besides the above, at the forest depôt at Málcómpet, which is maintained for the supply of the station at Mahábaleshwar, the following sales took place :—

1,399 junglewood rafters for	...	Rs. 343 7 5
1,045 khandis firewood for	...	„ 1,313 4 0
23 khandis and 12 maunds charcoal for	...	„ 164 0 0
9,599 bámbus for	...	„ 161 7 6

123. The departmental timber operations in the Sholápur Division are necessarily confined to the cutting of a few bábul trees for timber and the clearing out and sale as firewood of dead and fallen trees in the reserves.

124. The timber market in the Surat Division was very much depressed, and only a small quantity of the departmentally felled timber was sold, as will be seen from the stock account appearing in the table below :—

No.	Range.	TREES.		YIELD.		Cost.	Receipts.	Remarks.
		Teak.	Jungle-wood.	Timber Pieces.	Firewood.			
1	Mándvi	9,460	...	33,344	...	Rs. a. p. 1,855 0 0	Rs. a. p. 5,095 0 0	26,612 timber pieces not sold.
2	Chikhli and Párdi ...	5,080	7,220	12,349	Khandis 1,126 Tons.	1,112 0 0	5,919 0 0	6,507 pieces of timber not sold.
3	Dángs... ..	1,689	...	Cubic ft. 35,025	162	1 6 per 12½ cubic feet.	.....	Not sold.
	Total ..	16,229	7,220	45,693 Cubic ft. 35,025	Khandis. 1,126 Tons. 162	.. ..	11,014 0 0	

125. In the Panch Maháls Division there was a considerable stock of timber, firewood, and bámbus at hand at the commencement of the year, all of which was sold as under :—

Range.	Material.	Quantity.	Sale Results.
			Rs. a. p.
Godhra	{ Timber	1,324 pieces.	625 12 0
	{ Firewood	4,771 khandis.	2,543 0 0
	{ Bámbus	626	4 3 0
Hálol	{ Timber	126	6 0 0
	{ Firewood	4,437½	240 4 0
	Total ... ..	.....	3,419 3 0

While the departmental transactions of the year consist of 8,028 timber pieces in the Godhra forests, which cost Rs. 478-10-11, and sold for Rs. 8,692-9-11, and 15,279 bámbus costing Rs. 210-2-0, which sold for Rs. 1,050.

I (e). Grass and other Minor Produce.

126. In the North Thána Division the bark of the ain trees (*Terminalia tomentosa*), which are felled departmentally producing timber and firewood, was stripped, packed, and sold at Rs. 5 per khandi of 784 lbs. to the fishermen of the coast for dyeing their fishing nets. The results are given below :—

Range.	Quantity.	Cost.	Receipts.
	K. m. lbs.	Rs. a. p.	Rs. a. p.
Bassein	101 7 0	50 10 0	506 4 0
Máhim	183 25 0	74 6 3	858 5 2
Dáhánu	85 14 0	147 0 0	290 0 0
Total	370 18 0	272 0 3	1,654 9 2

127. A departmental collection of the hirda nuts, the fruit of the *Terminalia chebula*, the myrobolan of commerce, was made as usual. The crop generally was an indifferent one, but in the Ahmednagar Division very much larger collections were made than during the previous year, when large thefts of hirda took place, and the thieves were caught and punished. The following table gives the collections and disposals of the year :—

Division.	Yield.		Cost.		Receipts.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
	K. m. s.	K. m. s.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
South Thána ...	140 23 6	160 7 3	1,283 3 2	1,270 4 1	2,935 13 8	2,393 11 2
Násik ...	159 24 24	82 3 4	3,240 6 9	922 8 6	4,080 1 1	1,230 8 9
Ahmednagar ...	140 6 4	225 11 4	709 5 0	1,453 15 9	2,527 7 6	2,853 2 7
Poona ...	156 0 16	169 3 8	782 13 9	809 14 1	394 12 9	3,560 12 3
Sátára ...	907 11 20	691 17 4	6,698 10 11	4,934 13 4	19,566 4 2	6,718 15 0
Total ...	1,504 10 14	1,328 13 23	12,719 12 7	9,391 7 9	29,504 7 2	16,747 1 9

128. In the South Thána Division a small quantity of hirda—12 khandis 3 maunds and 10 sers—collected after the close of the year, the cost of which amounted to Rs. 74-5-0, was sold for Rs. 160-12 1. Thus the crop of the season came to 172 khandis 10 maunds and 13 sers. In the Násik Division the crop was not a good one, and the cost of collection was high. The price realized at auction-sales varied in South Thána, at 2 annas a páli, Rs. 13-4-0, and in Ahmednagar Rs. 12-10-6 per Bombay khandi of 784 lbs. In the Sátára Division the price per Deshi khandi of 1,600 lbs. was only Rs. 30½, against Rs. 57 of the previous year, showing a very considerable decline.

2.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY PURCHASERS AND CONSUMERS.

NORTH THÁNA DIVISION.

129.

(a)—*Timber.*

Range.	Number of Trees.	YIELD.			Receipts.
		Timber Pieces.	Battens.	Firewood Khandis.	
					Rs. a. p.
Umbargaon ...	15,000	14,155	3,512	1,430	17,563 4 9
Dáhánu ...	20,000	20,788	5,007	3,780	27,139 15 11
Máhim ...	15,000	19,520	3,089	2,215	21,102 3 0
Váda ...	20,000	19,864	7,409	1,950	22,467 11 0
Total ...	70,000	74,327	19,017	9,375	88,273 2 8

130. The local population is allowed to remove firewood on permits on reduced rates, and the following quantities were thus taken :—

Range.	Head-loads, 9 pies man, 6 pies woman, 3 pies child.	Large Cart, Re. 1.	Small Cart, Re. 0-8-0.	Kowl Khandis in Boats, Re. 0-6-0.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sálsette ...	512 14 0	...	37 0 0	.....	549 14 0
Bassein ...	269 15 9	799 0 0	723 8 0	569 15 3	2,362 7 0
Máhim ...	...	...	1,577 8 0	908 15 5	2,486 7 5
Dáhánu ...	...	...	1,245 8 0	.....	1,245 8 0
Umbargaon ...	...	...	462 0 0	.....	462 0 0
Váda ...	...	42 0 0	100 8 0	.....	142 8 0
Total ...	782 13 9	841 0 0	4,146 0 0	1,478 14 8	7,248 12 5

131. Bámbus in like manner were removed by the local population for agricultural and domestic uses on specially reduced rates.

Range.	Padal at Rs. 5 per 100.	Manwel at Rs. 3 per 100.	Bundhi at Re. at 0-8-0 per cart.	Zhita at Re. 0-3-0 per cart.	Karvi (Strobilanthes) at Re. 0-4-0 per cart.	Total.
	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.
Sálsette	55 10 0	55 11 6	11 4 0	5 7 0	58 4 0	186 4 6
Bassein	503 1 9	89 0 6	508 1 6	203 3 0	309 2 6	1,612 9 3
Máhim	97 11 6	339 9 0	841 0 0	245 10 0	34 0 0	1,557 14 6
Dáhiánu	211 9 6	93 0 0	537 0 0	79 2 0	6 10 0	927 5 6
Umbargaon	...	0 7 0	65 0 0	36 6 0	25 8 0	127 5 0
Váda	54 4 3	220 15 6	197 1 6	12 15 0	...	485 4 3
Total	922 5 0	798 11 6	2,159 7 0	582 11 0	433 8 6	4,896 11 0

and for trade purposes the following quantities of bámbus were removed by contractors, who had purchased the right of removal by public competition :—

Range.	Number of Bámbus.	Rate per 100.	Receipts.
		Rs. a p.	Rs. a p.
Bassein	29,350	2 0 0	587 0 0
Máhim	70,360	{ 2 0 0 1 7 0 }	{ 1,225 12 3
Dáhiánu	75,500	{ 2 11 6 2 0 0 }	{ 1,830 14 6
Váda	1,55,591	{ 2 8 0 2 2 0 }	{ 3,407 8 5
Total	3,30,801	...	7,051 3 2

132. Other minor produce, such as the leaves of apta (*Bauhinia racemosa*), temburni (*Diospyros montana*) for the manufacture of native cigarettes, and shembi bark for colouring fishing nets were removed by contractors, who paid Rs. 2,023 for the cigarette leaves and Rs. 305 for the bark.

SOUTH THA'NA DIVISION.

133. The Bombay Municipality purchased the timber standing upon two strips, of 1,000 feet and 500 feet respectively, below the dam of the Tansa Lake for Rs. 7,100, and the timber upon a compartment within the bed of the lake was purchased by Messrs. Glover & Co., the lake contractors, for Rs. 4,800 at a rate of about Rs 40 per acre. Other purchases of trees standing upon lands which they and Messrs. Lovell, Mitchell and Co, the duct contractors of Tansa, required to clear for the construction of their works, were made by the above-mentioned firms for Rs. 1,244. Of firewood 1,789 khandis were removed by purchasers, realising Rs. 955. Bámbus at the rate of Rs. 2-5-3 per 100 sold to contractors and by permit to villagers realised Rs. 5,162-4-0, while other minor produce produced Rs. 4,684-4-0 of revenue.

134. In the Khándesh divisions the permit system obtains, under which dead timber is removed at Rs. 4 per cart-load and 4 annas a head-load ; fuel 4 annas per cart-load and charcoal at Re. 1 per cart ; the collections appear in the statements attached to the report. The other minor produce receipts are large, and are made up chiefly by the proceeds of the contracts for the manufacture of rosha, or grass oil : 213 stills were working in the West Khándesh Division, and Rs. 7,250 were realised therefrom.

135. The transactions under the several sub-heads of receipts in the different divisions appear fully detailed in the appendices of this report, and there is nothing deserving notice here.

3.—PRODUCE REMOVED BY RIGHT HOLDERS.

136. No rights, save of way and water access, have been found by the Forest Settlement Officers to attach to the forests of the Northern Circle, and right holders have no *locus standi* in any of the forests,

4.—FREE GRANTS OF TIMBER.

137. A comparative statement of free grants of timber which have been made during the past two years is given :—

No.	Forest Division.	1884-85.	1885-86.	1886-87.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
1	North Thána... ..	5 14 0	.....	50 0 0
2	South Thána... ..	1,759 4 0	619 13 0	336 5 0
3	East Khándesh	7 12 0	.....	.....
4	West Khándesh	1,360 13 5	1,221 13 5	1,639 4 0
5	Násik	209 12 6	477 5 5	348 10 4
6	Ahmednagar	9 15 0	.....	.....
7	Poona	295 11 0	740 0 0	120 0 0
8	Sátára ... ..	.....	100 0 0	52 8 0
9	Sholápur ... ..	.....	.....	.....
10	Surat... ..	1,539 0 0	152 0 0	724 0 0
11	Panch Maháls	750 0 0	641 6 0	973 10 0
		5,938 1 11	3,952 5 10	4,244 5 4

138. In addition to the special free grants of timber, concessions of very considerable value are made in respect of the forests—to enjoy, to cut, and take. In the North Thána Division it is stated that timber of the inferior kinds valued at Rs. 17,175 has been taken from the forests by the poorer classes for building and repairing their huts. In the South Thána Division the value of the privileges exercised by the people in respect of forest produce during the year of the report is assessed at Rs. 2,55,248, made up as under :—

	Rs.
Firewood	1,90,740
Grazing and grass	23,386
Leaves, not including ráb	23,842
Fruit	200
Honey, wax, &c.... ..	1,050
Ráb material	16,030
	2,55,248

139. In the Poona Division it is estimated that 1,69,770 acres of pasturage are enjoyed free inside the forests, and that Rs. 55,000 are sacrificed on this account; and it may be safely estimated that the value of the produce of the forest estates in the Northern Circle, which the people appropriate in the shape of conceded privileges, exceeds considerably the total forest collections which are shown in the forest accounts.

5.—SUMMARY OF PRODUCE REMOVED FROM THE FORESTS.

140. The following is a summary of the timber and other forest produce removed from the forests during the year as compared with the preceding year :—

Description of Produce.	1885-86.		1886-87.	
	Number.	Khandis.	Number.	Khandis.
(a) Timber.		Cubic feet.		Cubic feet.
Teak logs, green	...	9,784	...	558
Do. dead	...	Khandis.	...	...
Teak rafters	3,17,576	200	7,75,784	657
Do. pieces	4,76,981	...	1,35,173	...
Do. posts	1,511	...	7,069	...
Do. beams	248	...	39	...
Do.	...	...	29,926	...
Do.	7,780	...	12,155	...
Blackwood logs	...	1,476	...	...
Do. pieces	18	...	115	...

Description of Produce.	1885-86.		1886-87.	
	Number.	Khandis.	Number.	Khandis.
Khair (<i>Acacia catechu</i>) logs	3,239	...	256	...
Do. ... Cart-loads.	101	...	1,059	...
Bábul (<i>Acacia arabica</i>) logs	298	...	412	...
Do. bark	5	3	...	3
Hed or haladván (<i>Nauclea cordifolia</i>)	...	Cubic feet. 4,604	...	90
Bibla or beo (<i>Pterocarpus marsupium</i>)	...	Khandis. 1,815	...	100
Tannach or tivas (<i>Dalbergia oojenensis</i>)	130	...	4,311	109
Ain (<i>Terminalia tomentosa</i>) logs	4,195	...	6,931	...
Do. bark	...	249	...	343
Kanti (<i>Acacia procera</i>)	1,844	...	27	...
Junglewood rafters	59,584	...	80,809	...
Do. ... Cart-loads.	5,778	...	40,280	...
Palm logs	1,180	...	508	...
(b) <i>Firewood.</i>				
Firewood Cart-loads.	41,680	...	51,746	...
Do. ... Head-loads.	23,994	...	30,331	...
Do. ... Cubic feet.	...	31,016	...	2,942
Do. ... Khandis.	...	878	...	45,744
Do. ... Tons.	...	...	...	1,050
Charcoal	...	39	...	21
Do. ... Cart loads.	12	...	71	...
Do. ... Head-loads.	6,944	...	8,724	...
Firewood ... Pieces.	70,940	...	2,106	...
(c) <i>Bámbus.</i>				
Bámbus	21,36,062	...	20,03,876	...
Do. ... Cart-loads.	6,473	...	5,226	...
Do. ... Head-loads.	20,243	...	36,419	...
Small bámbus Cart-loads.	3,675	...	1,773	...
Do. ... Head-loads.	337	...	913	...
Canes... ..	661	...	40	...
(d) <i>Sandalwood.</i>				
Sandalwood rafters	488	...	Trees. 105	...
(e) <i>Grass and other Minor Produce.</i>				
Karvi... .. Cart-loads.	2,918	...	2,075	...
Do. ... Head-loads.	19,766	...	24,684	...
Mowra flowers	72	Kh. mds. 200 4	20	41 12
Hirda... ..	...	1,493	...	933 15
Shikakái	...	35	...	70
Grass... .. Cart-loads.	420	...	1,500	...
Honey	...	Mds. 294	...	Mds. 171
Wax	...	Khandis. 17	...	...
Stones Cart-loads.	14,411	...	20,166	Cubic feet. 17,500
Do. ... Donkey-loads.	76	...	...	...
Earth... .. Cart-loads.	132	...	455	...
Do. ... Cubic feet.	...	800	...	Khandis. 900
Thorns Cart-loads.	1,231	...	1,600	...
Do. ... Head-loads.	18,423	...	19,325	...
Do. ... Bullock-loads.	36	...	25	...
Dhávda leaves Bundles.	11	...	57	...
Apta do. Cart-loads.	15	...	Bundles. 9,61,925	...
Táhál (ráb material) Cart-loads.	...	...	12	...
Do. ... Head-loads.	...	...	23,400	...

CHAPTER V.

FINANCIAL RESULTS.

141. The following table exhibits a comparison between the revenue and expenditure of the past three years :—

Official Year.	Receipts.	EXPENDITURE.									Net Revenue.
		A.—Conservancy and Works.			B.—Establishments.			Total.			
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		
1884-85 ...	10,08,725 3 1	4,04,378 2 6	2,85,709 11 3	6,90,087 13 9	3,18,637 5 4						
1885-86 ...	10,37,296 9 7	1,89,881 11 7	4,73,758 0 5	6,63,639 12 0	3,73,656 13 7						
1886-87 ...	9,13,100 15 6	2,09,072 11 10	4,78,792 3 8	6,87,864 15 6	2,25,236 0 0						

142. The gross receipts of the year have fallen to about the same figure as the receipts of 1882-83, which amounted to Rs. 9,13,531. The stagnation of the timber market in the Thána District and the absence of any demand for timber from the Dāngs and Māndvi forests of the Surat Division, combined with a sudden and unaccountable fall in the prices for myrabolans, have contributed to this result.

143. The distribution of receipts among the several divisions in the circle, compared with the collections of the preceding year, is as under :—

No.	Forest Division.	1885-86.	1886-87.	Increase.	Decrease.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Direction ...	1,190 14 8	25 4 0	.....	1,165 10 8
2	North Thána ...	2,42,729 2 4	2,19,187 14 9	.....	23,541 3 7
3	South Thána ...	1,03,413 2 2	1,03,841 7 7	428 5 5	.....
4	East Khándesh ...	59,690 8 6	61,888 14 4	2,198 5 10	.....
5	West Khándesh ...	1,02,709 0 9	90,902 15 5	.....	11,806 1 4
6	Násik ...	1,18,019 15 9	1,06,586 9 7	.....	11,433 6 2
7	Ahmednagar ...	31,568 6 1	44,116 12 11	12,548 6 10	.....
8	Poona ...	1,00,967 11 6	89,928 5 6	.....	11,039 6 0
9	Sátára ...	80,866 2 11	69,101 0 2	.....	11,765 2 9
10	Sholápur ...	16,798 14 4	7,392 15 3	.....	9,405 15 1
11	Surat ...	1,11,527 2 7	69,704 3 2	.....	41,822 15 5
12	Panch Maháls...	67,815 8 0	50,424 8 10	.....	17,390 15 2
	Total ...	10,37,296 9 7	9,13,100 15 6	15,175 2 1	1,20,370 12 2

144. In most of the divisions the revenue has decreased. In the North Thána Division there is a considerable decrease, owing chiefly to the low prices obtained at the retail auction sales. Depression in the rice trade, and the consequent inability of the rayats to sell their stock of rice at advantageous price, and to command funds, is stated to be one of the causes of the indifferent demand for timber. Another reason is that 5,000 trees, originally intended to be felled and sold departmentally, were sold on foot. In West Khándesh there is a decrease on account of bad prices obtained for timber departmentally felled, and it having been impossible to sell all the timber during the year. There was also a decrease of Rs. 5,225 on account of duty not being levied from the Mewás States, as directed in Government Resolution No. 8134 of the 7th October 1885. In the Násik Division the decrease is due to the smaller collection of hirda, owing to a bad crop. Contractors and purchasers of timber standing did not work out the quantities they had engaged to, owing to a very discouraging condition of the timber market. In the Poona Division the decrease is due to poor prices owing to fellings of inám teak, especially in Haveli and Purandhar, and to large importations of málki teak from Kolába. In the Sátára Division the crop of hirda, the nut of the Terminalia chebula, was very short of the quantity expected, and the price of the article fell suddenly in a quite unexpected and unaccountable manner, and the revenue suffered in consequence. In Sholápur there is a decrease owing to the discontinuance of auction sales for grazing and

the substitution of the fee system, which did not prove remunerative. In the Surat Division the decrease is owing to the demand for timber being slack, and the departmental teak not having been disposed of during the official year 1886-87. The Dáng material could not be sold, the price offered being quite inadequate. The money due from the Upper Dáng contractors was not realised during the year. No revenue was obtained from catechu during the year, the price offered being very low. In the Panch Maháls Division the decrease in revenue is due to the poor prices realised for timber and firewood. The demand for firewood fell considerably. The chief cause of decrease of revenue under II *d*.—Grazing and Fodder Grass—is due to free grazing having been conceded for the cattle of all villagers who are not professional graziers.

145. There is an increase of revenue only in the 3 forest divisions of South Thána, East Khándesh, and Ahmednagar. In the South Thána Division the increase being trifling, only Rs. 428-5-5, no explanation is necessary. In the East Khándesh Division the increase of revenue is Rs. 2,198-5-10 over the actuals of past year and Rs. 2,980 over the sanctioned estimate of 1886-87; this is mainly due to grazing receipts under II *d* having been increased, as no free grazing is allowed in the forests of this division. In the Ahmednagar Division there was an increase of revenue in grazing; and though the price of hirda declined, a larger collection of nuts was made than had been estimated, and the larger supply more than counterbalanced the heavy fall in the selling price.

146. Revenue of the year under report on the whole shows a net decrease of Rs. 1,24,195-10-1 when compared with the actuals of past year, *viz.*, 1885-86.

147. Expenditure under A.—Conservancy and Works distributed among the several forest divisions, as compared with the expenditure of last year, is as under:—

No.	Forest Division.	1885-86.	1886,87.	Increase.	Decrease.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Direction	86 13 0	42 14 2	.....	43 14 10
2	North Thána ...	25,929 9 0	31,454 14 0	5,525 5 0	.....
3	South Thána ...	28,014 8 0	31,475 12 9	3,461 4 9	.....
4	East Khándesh ...	11,162 6 0	9,222 7 3	.....	1,939 14 9
5	West Khándesh ...	19,779 4 3	10,723 4 6	.....	9,055 15 9
6	Násik ...	16,442 1 6	14,175 7 1	.....	2,266 10 5
7	Ahmednagar ...	16,000 14 8	17,016 7 8	1,015 9 0	.....
8	Poona ...	14,814 10 5	24,466 9 4	9,651 14 11	.....
9	Sátára ...	28,452 0 3	19,826 7 10	.....	8,625 8 5
10	Sholápur ...	6,401 8 8	7,998 0 8	1,596 8 0	.....
11	Surat ...	16,887 11 1	21,854 8 10	4,966 13 9	.....
12	Panch Maháls...	5,910 4 9	4,940 0 10	.....	970 3 11
13	Working Plans ...	.....	15,875 12 11	15,875 12 11	.....
	Total ...	1,89,881 11 7	2,09,072 11 10	42,093 4 4	22,902 4 1

148. Expenditure under “A.—Conservancy and Works” shows a decrease of Rs. 22,902-4-1 upon that of 1885-86 in some divisions, while in others there is an increase aggregating Rs. 42,093-4-4, and thus the net increase in expenditure amounts to Rs. 19,191-0-3. The Working Plans Division exhibits an increase of Rs. 15,875-12-11, while in 1885-86 there was no expenditure on this account, and also under A *VIII b*.—Compensation for Land and Rights—there was an increase of expenditure over the actuals of 1885-86.

149. Against “B.—Establishments” the expenditure under superior officers is less, as the pay of the Divisional Forest Officer, Working Plans, is charged to A *VIII c* instead of to B, which is the appropriate place, under instructions from the Accountant General. Under B *I c* there is a saving of Rs. 3,002-2-4, while, on the other hand, there is an increase of Rs. 6,827-0-4 under B *III f*—Sundries—on account of the cost of uniforms supplied to the subordinate protective establishments and Rs. 845-2-5 on account of payments to officers of other provinces being debited to the Northern Circle during the year under report. The net increase of expenditure under B is Rs. 5,034-3-3 over the actuals of 1885-86.

CHAPTER VI.

GENERAL REMARKS.

150. On the 1st April 1886 the Conservator's camp was at Bhanvád on the Násik Gháts, the Divisional Forest Officer of Násik being in company; forests and works were inspected, and the divisional forest office was examined. From Bhanvád the Conservator marched through the Kalvan and Báglán ranges of Násik into the West Khándesh Division. Mr. Mainwaring, the Divisional Forest Officer, met him on the frontier, and after passing through the Nizámpur and Dhulia ranges and inspecting the 2 divisional forest offices of Khándesh, Mr. Greatheed having met the Conservator at Dhulia, the camp marched to Málegaon, Manmád, and on to the eastern districts of the Poona Division, where the bábul reserves in the Bhimthadi Range were inspected. The improvement appearing in the growth in the old and new reserves is remarkable; dense cover has formed over the ground in places where a few years ago the land was quite bare, and there is no doubt that these forest estates will soon be very much more remunerative properties than they are already. From the valley of the Bhíma the Conservator proceeded to Mahábaleshvar, arriving there on the 14th May, and he returned to head-quarters at Poona for the rainy season on the 14th June.

151. In November the Conservator was out in camp in the Sholápur District with Mr. Millett, the Divisional Forest Officer: the reserves in the Karmála Táluka were visited, and the divisional forest office was examined. The forest vegetation here has come on beautifully, and grass of good quality is growing in abundance upon land which not long ago was bare barren stony "mal." From the Sholápur Division the Conservator marched into the Jámkhed Táluka of Ahmednagar, where Mr. Mainwaring met him. The hills here upon the Nizám's frontier are rapidly becoming forest-clad, trees are asserting themselves among the scrub. From Jámkhed the Conservator was driven into Nagar by a heavy fall of rain lasting some twelve hours, which flooded the country and made the rivers overflow their channels, the diminished capacity of the latter owing to depositions of silt in them rendering them incapable of carrying off the rain-water which the semi-denuded drainage slopes could not restrain and store up; and thus tons of water, which would have benefited the cultivation on the plains could it have been impounded by the hills, returned from the district towards the ocean unused locally, and doing harm by the way. The divisional forest office was inspected. Forests in the Párner and Shrigonda tálukás as well as the forest at Dongargaon were examined, and the Conservator returned by way of the Sirúr Range of the Poona Division to head-quarters for the Christmas vacation.

152. The camp having been sent down by railway to the South Thána District on the 4th January it was established at Chandai. Mr. Hornidge came there shortly afterwards, and the Conservator had a conference with the 2 Divisional Forest Officers of North and South Thána respectively and with Mr. Fry, the Divisional Forest Officer, Working Plans, regarding the working plan arrangements of the forests of the Thána District. The Conservator then went to the Máhím Táluka of North Thána, inspecting with Mr. Wilkins forests in the Máhím, Dáhánu, and Umbargaon ranges.

153. Leaving the Thána District after the 2 divisional forest offices had been examined, the Conservator moved into the Panch Maháls, inspected the Godhra Táluka forests with the Divisional Forest Officer Mr. Keys; met the Collector and the Forest Settlement Officer; examined the divisional forest office, and then went south into the Mándvi Táluka of the Surat Division, where Mr. Gleadow joined him, and travelled with him over the forests of the Mándvi Range. The Collector of Surat, Mr. Mulock, was met, and forest matters were discussed in camp, and the divisional forest office was examined.

154. From the Surat District the Conservator marched up the Tápti valley through Songad to the Navápur forests of West Khándesh, and from there the forest depôt in the Dángs below the Jackriabari was visited, and the Conservator marched through the Pimpalner Táluka of West Khándesh to Mulher, and on the 31st March 1887 his camp was in the Chándor Range.

155. The Divisional Forest Officers generally have worked in a satisfactory manner, and the Conservator would mention the names of Messrs. Wroughton, Mainwaring, Fry, Wilkins, Keys, Millett, W. G. Betham, as deserving special

commendation. Of the Sub-Assistants, Messrs. Madan, Clabby, Mahajan (who has died since the close of the year), Blackwell, Wallinger, and Gaundé have been very active, energetic, and industrious.

156. Of the Range Forest Officers, upon whom devolves the greatest responsibility and very hard work, several have shown again by the highly creditable performance of their duties during the year what valuable public servants they are. The names of forest rangers—

Shaik Abas Shaik Alli,
Hasan Ali Mahomed Ali,
Chimnáji Parashram,
Elahibax Khajbax,
Kashináth Mahiput,
Naráyan Sakháram Kharé,
Luxuman Bhiwji Pápdé,
Wáman Gopál Tumné,
Abdul Rasul Khajbax,
Vishnu Mahádeo Tilak,
Govind Rámchandra Taklé,
Báláji Dhondeo Dhekné,
Aminodin Ali Udin,
Rámchandra Rowji Bodhwadkar,
Sitáram Hari Vazé,

have been especially distinguished.

157. The office work demanded of Forest Officers necessitates much attendance at the desk, and gives constant and long employment to a large staff of clerks, for the system of accounts is very elaborate, requiring the submission periodically of numerous returns, forms, and statements. The Conservator is of opinion that simplification of the system is called for, and is possible. It is undesirable that the movements of the Divisional Forest Officer in his district tour of forest inspections should be hampered by the transport of a numerous establishment of clerks and cart-loads of office furniture and records. A change might be made upon the lines that instead of every Divisional Forest Officer having to take with him into the districts on tour a large number of clerks constituting his accounts branch, in order to prepare and submit a set of divisional accounts, there might be one central office of accounts for the whole circle at the headquarters station of the circle, where all the divisional receipts and charges might be embodied into one general cash account for the circle; the Divisional Forest Officers would then forward all their receipted vouchers and chalans with the counterfoils of the cheques issued by them relating to the month, and these documents would in the general accounts office be included in the monthly cash account of the circle.

158. The office establishments have performed their duties in a highly creditable manner, and the following names are specially mentioned:—Messrs. Ganesh Sakháram Hingé, Krishnáji Bábaji Phadké, and Antáji Krishna Deshpánde in the Conservator's office; Shivrám Bhikáji Rangnekar, Nimbráj Kesheo Chandekar, Trimbak Govind Mahajan, and Trimbak Bhikáji Lawhate in the divisional forest offices.

159. The forest classes in the College of Science contained 2 scholars in the senior and 2 in the junior class. Two men have passed the final examination: one of these has obtained employment in the Cutch State and the other in another Native State. Mr. T. B. Fry, Divisional Forest Officer, Working Plans, delivered a series of lectures upon forestry at the forest classes,

160. A civil suit, known as the Goema case, brought by one Ranchod Enderjee, a timber-dealer, against the Forest Department in the Surat Division, was decided by the Sessions Judge of Surat in favour of this department. Khán Sáheb Dádábhái Nasarvánji Nanávati, Mámledár of Párdi, did excellent service in rendering great assistance to the Government Pleader, Mr. Keválráam Oomidráam, who successfully conducted the defence in behalf of the Forest Department, in a very able and satisfactory manner.

A. T. SHUTTLEWORTH,

Conservator of Forests, N.C.

FORM No. 49.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Area of Reserved Forests, 1886-87.

Division.	Civil District or Territory.	Name of Forest.	Area on 1st April 1886.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1887.		Number and Date of Notification of addition or transfer.	Remarks.
			Acres.	Sq. m. a.			Acres.	Equivalent in Square Miles.		
North Thána ...	Thána ...		1,68,651	263 331	a 13,649	b 4	1,82,296	284 536	a No. 1056 No. 5690	
South Thána ...			1,80,481	282 1	28,085	171	2,08,395	325 395	15-2-87 9-8-86	
East Khándesh ...	Khándesh ...		4,27,596	668 76	...	...	4,27,596	668 76	b No. 7,903 8-11-86	
West Khándesh ...			7,78,733	1,216 493	c 348	d 748	7,78,333	1,216 93	c 7020A 1608	e 1,379 rectification of area.
Násik ...	Násik ...		6,93,315	1,083 195	e 18,584	950	7,10,949	1,110 549	4-10-86 16-3-87	f 5,805 acres rectification of area.
Ahmednagar ...	Ahmednagar ...		5,15,288	805 88	f 34,859	g 14,854	5,35,293	836 253	d 3604 207	g 10,326 acres do. do.
Poona ...	Poona ...		4,55,059	711 19	h 9,054	2,012	4,62,101	722 21	19-5-86 11-1-87	1,692 acres according to old survey transferred to the Poona Collectorate.
Sátára ...	Sátára ...		4,10,556	641 316	12,644	1,040	4,22,160	659 400		11,928 acres according to the revision survey have been added on account of the transfer of 2 villages from the Ahmednagar Collectorate.
Sholápur ...	Sholápur ...		1,07,186	167 306	42,541	660	1,49,067	232 587		
Surat ...	Surat ...		44,284	69 124	...	...	44,284	69 124		
Dangs ...	Dangs ...		5,76,000	900 0	...	...	5,76,000	900 0		
Kaira ...	Kaira ...		39	0 39	...	...	39	0 39		
Panch Mahals ...	Panch Mahals ...		1,33,419	208 299	i 901	2,889	1,31,431	205 231		
Total ...			44,90,607	7,016 367	1,60,665	23,328	46,27,944	7,231 104		

A. T. SHUTTLEWORTH,

Conservator of Forests, N.C.

Poona, 25th October 1887.

FORM No. 49 A.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Area of Protected Forests, 1886-87.

Division or Range.	Civil District or Territory.	Name of Forest.	Area on 1st April 1886.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1887.		Number and Date of Notification of addition or transfer.	Remarks.
			Acres.	Equivalent in Square Miles.			Acres.	Equivalent in Square Miles.		
North Thána ...	} Thána ...	}	{ 1,92,621	Sq.m. a. 300 621	...	*1,532	1,91,089	298 369	+ Nos. 7105, 7533 and 7534, dated 6th and 25th October 1886 respectively.	* 926 acres rectification of area.
South Thána ...			{ 2,26,000	353 80	...	30	2,25,970	353 50		
East Khándesh ...			{ 98,434	153 514	...	+31,567	66,867	104 307		
West Khándesh ...	} Khándesh	}	{ 1,24,777	194 617	...	...	1,24,777	194 617		† Rectification of area.
Násik ...			...	...	...	...	...	...		
Ahmednagar ...			6,573	10 173	698	+117	7,154	11 114		
Poona ...	} Poona ...	}	...	...	...	...	...	...		
Sátára ...			17	0 17	...	...	17	0 17		
Sholápur ...			...	...	...	...	...	...		
Surat ...	} Surat ...	}	...	...	...	...	...	...		
Dángs ...			...	...	...	...	...	...		
Kaira ...			...	...	...	...	...	...		
Panch Mahals ...	} Kaira ...	}	...	...	...	...	...	...		
			...	...	...	...	...	...		
			...	...	...	...	75,627	118 107		
Total...			6,48,422	1,013 102	76,325	33,246	6,91,501	1,080 301		

Poona, 25th October 1887.

A. T. SHUTTLEWORTH,

Conservator of Forests, N. C.

FORM No. 50.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Register of Breaches of Forest Rules during 1886-87.

I.—Prosecutions in the Courts of Law.

Forest Division and Civil District.	Cases pending from 1885-86.	NEW CASES OF THE YEAR.					Total Cases.	DISPOSED OF DURING THE YEAR.				Cases pending at close of year.		
		Injury to Forests by fire.	Unauthorized felling or appropriation of wood and minor Forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other Offences.	Total new Cases of the year.		CONVICTIONS.		ACQUITTALS.				
								Cases.	Persons.	Cases.	Persons.			
North Thána	...	...	41	...	1	42	42	32	99	10	22	42	121	...
South Thána	13	3	73	...	5	81	94	53	116	28	67	81	183	13
East Khândesh	5	10	9	2	2	23	28	16	62	9	19	25	81	3
West Khândesh	2	4	24	55	6	89	91	32	54	21	55	53	109	38
Nâsik	5	2	119	5	25	151	156	132	328	18	56	150	384	6
Ahmednagar	22	...	33	74	31	138	160	82	141	64	168	146	309	14
Poona	2	1	54	17	28	100	102	75	178	24	44	99	222	3
Sâtâra	2	3	56	14	14	87	89	16	34	71	143	87	177	2
Sholâpur	6	...	9	55	24	88	94	63	152	25	81	88	233	6
Surat	...	...	2	...	2	4	4	2	7	2	4	4	11	...
Panch Mahâls	...	...	35	...	1	36	36	30	79	6	19	36	98	...
Total	57	23	455	222	139	839	896	533	1,250	278	678	811	1,928	85

Poonâ, 25th October 1887.

A. T. SHUTTLEWORTH,
Conservator of Forests, N. C.

FORM No. 51.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Area of Forest Tracts protected from Fire during the dry season 1887 to accompany Report for 1886-87.

Division.	Forest Tracts.	Year in which protection commenced.	Area actually protected up to 15th June 1886.	DURING DRY SEASON OF 1887.			Cost during the season.	Remarks.
				Area attempted to be protected.	Failures.	Actually protected.		
			A cres.	Acres.	Acres.	Acres.	Rs.	
North Thána.	Sálsette ...	1878-79 ...	11,707	17,243	266	16,977	61	Fire - conservancy has been in operation for many years, but the year 1878-79 is entered here as the date from which the reservations were brought upon legal foundation.
	Bassein ...	" ...	55,861	41,393	4,000	37,393	21	
	Máhim ...	" ...	80,491	1,01,407	3,044	98,363	336	
	Dáhnú ...	" ...	1,17,416	1,26,673	2,455	1,24,218	14	
	Umbargaon ...	" ...	33,434	38,717	637	38,080	...	
	Váda ...	" ...	46,113	48,560	15,401	33,159	18	
	Total ...		3,45,022	3,73,993	25,803	3,48,190	450	
South Thána.	Bhiwandi ...	1878-79 ...	31,079	46,152	2,383	43,769	8	
	Shahápur ...	" ...	...	86,172	3,102	83,070	2	
	Kinowli ...	" ...	4,591	64,431	5,912	58,519	21	
	Mokháda ...	" ...	...	31,533	...	31,533	...	
	Kalyán ...	" ...	17,505	35,000	2,147	32,853	...	
	Murbád ...	" ...	...	90,840	3,185	87,655	...	
	Karjat ...	" ...	1,050	23,930	183	23,747	6	
	Khálápur ...	" ...	2,907	17,745	40	17,705	13	
	Total ...		57,132	3,95,803	16,952	3,78,851	50	
East Khán-desh.	Amalner ...	1878-79 ...	19,917	733	43	690	...	
	Bhadgaon ...	" ...	18,640	15,277	...	15,277	...	
	Bhusával ...	" ...	1,596	2,275	1,302	973	...	
	Chálisgaon ...	" ...	61,180	15,760	670	15,090	...	
	Chopda ...	" ...	1,00,202	3,34,871	3,320	3,31,551	...	
	Edalábad ...	" ...	32,556	2,937	50	2,887	...	
	Erándol ...	" ...	18,502	18,502	...	18,502	...	
	Jalgaon ...	" ...	22,140	11,341	1,512	9,829	...	
	Jámner ...	" ...	41,376	41,866	1,031	40,835	...	
	Páchora ...	" ...	6,768	6,687	5	6,682	...	
	Ráver... ..	" ...	...	...	...	...	...	
	Sánda... ..	" ...	1,69,782	42,852	13,095	29,757	...	
	Yával... ..	" ...	...	...	...	...	...	
	Total ...		4,92,659	4,93,101	21,028	4,72,073	...	
West Khán-desh.	Dhulia ...	1878-79 ...	1,11,698	1,11,698	30	1,11,668	...	
	Nandurbár ...	" ...	70,977	72,747	8,855	63,892	...	
	Navápur ...	" ...	79,100	81,400	14,000	67,400	...	
	Nizámpur ...	" ...	1,49,026	1,49,851	14,810	1,35,041	...	
	Pimpalner ...	" ...	56,747	56,962	1,523	55,439	...	
	Sháháda ...	" ...	50,615	51,506	285	51,221	...	
	Shirpur ...	" ...	13,958	18,610	455	18,155	...	
	Taloda ...	" ...	2,21,325	2,21,685	1,933	2,19,752	...	
	Akrani ...	" ...	1,768	1,778	605	1,173	...	
	Total ...		7,55,214	7,66,237	42,496	7,23,741	...	
Násik	Násik... ..	1878-79 ...	29,056	31,070	765	30,305	4	
	Igatpuri ...	" ...	37,254	37,254	256	36,998	...	
	Sinnar ...	" ...	39,342	39,546	46	39,500	...	
	Dindori ...	" ...	18,441	20,230	1,977	18,253	...	
	Niphád ...	" ...	3,508	3,416	...	3,416	...	
	Chándor ...	" ...	18,600	21,948	...	24,948	...	
	Yeola... ..	" ...	18,908	31,363	21	31,342	...	
	Báglán ...	" ...	1,17,266	1,24,497	6,682	1,17,815	...	
	Kalvan ...	" ...	99,853	1,09,355	1,692	1,07,663	...	
	Peint ...	" ...	68,554	60,289	429	59,860	...	
	Málegaon ...	" ...	1,17,799	1,21,914	...	1,21,914	...	
	Nándgaon ...	" ...	1,06,688	1,07,067	342	1,06,725	...	
	Total ...		6,75,269	7,10,949	12,210	6,98,739	4	
Ahmednagar.	Nagar ...	1878-79 ...	34,805	40,683	243	40,440	1	
	Párner ...	" ...	68,293	69,717	149	69,568	2	
	Shrigonda ...	" ...	43,582	43,395	1,198	42,197	...	
	Karjat ...	" ...	49,764	50,040	303	49,737	...	
	Jámkhed ...	" ...	36,361	39,279	486	38,793	...	
	Shevgaon ...	" ...	18,616	27,184	326	26,858	...	
	Nevása ...	" ...	19,885	20,535	15	20,520	...	
	Ráhuri ...	" ...	40,129	48,673	27	48,646	...	
	Kopargaon ...	" ...	4,899	5,102	...	5,102	...	
	Sangamner ...	" ...	94,557	85,825	203	85,622	...	
	Akola... ..	" ...	1,09,433	1,13,615	365	1,13,250	13	
	Total ...		5,20,315	5,44,048	3,315	5,40,733	16	

FORM No. 51—continued.

Division.	Forest Tracts.	Year in which protection commenced.	Area actually protected up to 15th June 1886.	DURING DRY SEASON OF 1887.			Cost during the season.	Remarks.
				Area attempted to be protected.	Failures.	Actually protected.		
		Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	
Poona	Junnar ...	1878-79...	61,103	55,268	230	55,038	...	
	Indápur ...	"	62,583	59,789	137	59,652	...	
	Khed ...	"	56,087	55,332	616	54,716	...	
	A'mbegaon ...	"	44,295	43,479	1	43,478	...	
	Sirúr ...	"	19,124	20,206	236	19,970	...	
	Purandhar ...	"	25,952	25,423	29	25,394	4	
	Bhimthadi ...	"	53,827	53,799	83	53,716	...	
	Báramati ...	"	20,049	19,734	8	19,726	...	
	Haveli ...	"	49,732	50,009	351	49,658	1	
	Mulshi ...	"	27,810	25,234	...	25,234	1	
	Mával ...	"	53,731	53,828	...	53,828	1	
	Total ...		4,74,293	4,62,101	1,691	4,60,410	7	
Sátára	Mahábaleshvar ...	1878-79...	38,958	40,918	30	40,888	...	
	Mán ...	"	54,141	56,152	...	56,152	...	
	Khatáv ...	"	16,257	16,257	...	16,257	...	
	Karád ...	"	34,444	35,667	22	35,645	...	
	Wái ...	"	24,391	24,792	16	24,776	...	
	Koregaon ...	"	28,986	28,976	4	28,972	...	
	Sátára ...	"	21,600	22,263	60	22,203	...	
	Tásgaon ...	"	12,449	12,449	10	12,439	...	
	Khaudála ...	"	13,792	14,194	...	14,194	...	
	Jávli ...	"	47,795	50,398	9	50,389	...	
	Khánápur ...	"	29,716	29,717	52	29,665	...	
	Válva ...	"	24,916	25,790	...	26,790	...	
	Pátan... ..	"	61,847	63,587	2,374	61,213	...	
	Total ...		4,09,322	4,22,160	2,577	4,19,583	...	
Sholápur	Bársi ...	1878-79...	8,495	8,536	...	8,536	...	
	Mádha ...	"	31,001	31,362	934	30,428	...	
	Karmála ...	"	7,264	42,942	775	42,167	...	
	Pandharpur ...	"	4,663	5,707	...	5,707	...	
	Sángola ...	"	3,724	3,739	363	3,376	...	
	Málsiras ...	"	20,774	21,392	...	21,392	...	
	Sholápur ...	"	31,041	35,387	63	35,324	...	
	Total ...		1,06,962	1,49,065	2,135	1,46,930	...	
Surat	Mándvi ...	1878-79...	...	41,479	1,862	39,617	...	
	Dángs ...	"	...	5,76,000	30,775	5,45,225	...	
	Chikhli ...	"	425	825	710	115	...	
	Bulsár and Párdi ...	"	1,503	1,529	...	1,529	...	
	Bárdoli ...	"	...	451	...	451	...	
	Total ...		1,928	6,20,284	33,347	5,86,937	...	
Panch Maháls	Godhra ...	1878-79...	98,921	86,386	516	85,870	...	
	Kálol ...	"	20,722	17,565	842	16,723	...	
	Hálol ...	"	28,375	29,994	10,730	19,264	...	
	Dohad ...	"	40,865	46,427	721	45,706	...	
	Jhálod ...	"	30,129	26,585	2,000	24,585	...	
	Total ...		2,19,012	2,06,957	14,809	1,92,148	...	
	Grand Total ...		40,57,128	51,44,698	1,76,363	49,68,365	527	

A. T. SHUTTLEWORTH,
Conservator of Forests N. C.

Poona, 25th October 1887.

FORM No. 52.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Area of Plantations, 1886-87.

Division.	Name of Plantation.	AREA IN ACRES.				RE-CHITS.	CHARGES.	Remarks.
		On 1st April 1886.	Added during the year.	Excluded during the year.	Area on 31st March 1887.	Of the year.		
	Regular Plantations.	Acres.	Acres.	Acres.	Acres.		Rs.	
North Thána...	Párgaon	87	...	...	87	...	32	* This plantation was inadvertently omitted by the Divisional Forest Officer in his last year's statement.
	Sophála	306	...	...	306	...	70	
	Kamare	393	...	...	393	...	448	
	Wankas	831	...	...	831	...	281	
	Khaire	263*	...	...	263	...	202	
	Dáhanu	2	...	...	2	...	2	
	Karmbeli	127	...	...	127	...	1	
	Pách Pakhádi	1	1	...	2	...	...	
	Persick	2	16	...	18	...	25	
	Kandivli	15	8	...	23	...	20	
	Adivli Butawli	2	3	...	5	...	35	
	Tungár	...	1	...	1	...	3	
	Nandni Gaigotha	8	56	...	64	...	38	
South Thána...	Kalambhai	1	...	...	1	...	...	† Out of this amount Rs. 920 were expended on fencing.
	Shil	...	20	...	20	...	7	
	Total	2,038	105	...	2,143	...	1,164†	
	Bhiwndi	...	261	...	261	...	48	
South Thána...	Mokháda	...	5	...	5	...	...	
	Karjat	...	5	...	5	...	...	
	Total	...	271	...	271	...	18	
East Khándesh...			Nil.					Expenditure on nurseries only.
West Khándesh.			Nil.					
Násik			Nil.					
Ahmednagar	Dongargan	142	...	...	142	...	513	
Poona			Nil.					
	Máini... ..	97	11	...	108	...	75	
Sátára	Vaduj	25	9	...	34	...	62	
	Katarkhatáv	30	11	...	41	...	33	
	Padli	359	...	148	211	...	122	
	Ekambé	...	12	...	12	...	13	
	Chachegaon	13	97	...	110	...	59	
	Kale	75	41	...	116	...	36	
	Tambvi	...	5	...	5	...	1	
	Ving	...	2	...	2	...	1	
	Sasurvi	...	4	...	4	...	5	
	Wasantgad	...	19	...	19	...	2	
	Bholi	9	...	9	...	...	...	
	Wátar	...	16	...	16	...	39	
	Tandulvádi	3	...	...	3	...	...	
	Kanegaon	30	...	...	30	...	81	
	Retre Dharnaché	10	...	10	...	...	...	
	Aitavádi	5	...	5	...	...	...	
	Daré Khurd... ..	41	...	37	4	...	12	
	Borgaon	34	9	25	18	...	178	
	Chinchni	...	1	...	1	...	2	
	Wái	45	...	45	...	...	...	
	Shidhnathvádi	...	205	...	205	...	32	
	Sultánpur	...	25	...	25	...	20	
	Mahimangad	14	...	14	...	...	...	
	Gondowli Khurd	18	30	...	48	...	40	
	Medha	36	7	36	7	...	19	
	Kás	...	21	...	21	...	52	
	Wágeshwar	10	...	10	...	...	...	
	Máhábaleshvar	110	35	...	145	...	31	
	Bhikavli	5	...	5	...	...	...	
	Bhuteghar	10	...	10	...	...	...	
	Avakáli	2	6	...	8	...	6	
	Guregar	25	...	...	25	...	4	
	Bondarvádi	2	30	...	32	...	20	
	Erándol	6	...	6	...	...	...	
	Lingmalá	54	22	...	76	...	99	
	Gutád	...	11	...	11	...	27	
	Máchutar	...	5	...	5	...	23	
	Málcómpet	...	25	...	25	...	27	
	Birvádi	...	6	...	6	...	4	
	Nágaz	...	100	...	100	...	100	
	Sáwarde	...	2	...	2	...	4	
	Kokisari	40	49	40	49	...	48	
	Vihé	...	15	...	15	...	17	
	Burli Amnápur	43	33	...	76	...	68	
	Shámgaon	15	7	...	22	...	15	

FORM No. 52—continued.

Division.	Name of Plantation.	AREA IN ACRES.				RE- CEIPTS.	CHARGES.	Remarks.
		On 1st April 1886.	Added during the year.	Excluded during the year.	Area on 31st March 1886.	Of the year.		
	<i>Regular Plantations— continued.</i>	Acres.	Acres.	Acres.	Acres.		Rs.	
Sátara...	Sonsal	20	...	20	...	...	...	
	Chinchni	...	13	...	13	...	29	
	Ghanvād	4	...	4	...	...	...	
	Total ...	1,190	884	424	1,650	...	1,406	
Sholápur...	...		Nil.					
Surat ...	...		Nil.					
Panch Maháls ...	Dayál... ..	5	...	5	...	...	...	
	Total Regular Plantations...	3,375	1,260	429	4,206	...	3,101	
	<i>Cultural Operations.</i>							
North Thána ...	...		Nil.					
South Thána ...	Bhiwndi	332	...	...	332	...	...	
	Kinowli	78	82	...	160	...	...	
	Khálápur	494	61	...	555	...	...	
	Karjat	167	18	...	185	...	...	
	Murbád	82	50	...	132	...	...	
	Sháhápur	26	29	...	55	...	...	
	Mokháda	14	50	...	64	...	...	
	Kalyán	62	40	...	102	...	...	
	Total ...	1,255	330	...	1,585	...	...	
East Khándesh.	Amalner	2,049	45	...	2,094	...	24	
	Bhadgaon	197	75	...	272	...	36	
	Bhusával	85	1,505	...	1,590	...	...	
	Chálisgaon	355	70	...	425	...	...	
	Chopda	215	140	...	355	...	...	
	Edlabád	300	40	...	340	...	...	
	Erándol	4,893	72	...	4,965	...	9	
	Jalgaon	175	198	...	373	...	21	
	Jámner	436	80	...	516	...	...	
	Páchora	5	20	...	25	...	1	
	Ráver... ..	57	32	...	89	...	...	
	Sávda	139	70	...	209	...	...	
	Yával	30	30	...	60	...	...	
Total ...	8,936	2,377	...	11,313	...	91		
West Khándesh	Akráni	29	66	...	95	...	...	
	Dhulia	2,375	238	...	2,613	...	79	
	Nandurbár	617	31	...	648	...	...	
	Navápur	731	300	...	1,031	...	...	
	Nizámpur	346	100	...	446	...	18	
	Pimpalner	986	398	...	1,384	...	93	
	Sháháda	130	10	...	140	...	...	
	Shirpur	1,562	61	...	1,623	...	...	
	Taloda	541	147	...	688	...	...	
	Virdel	4,674	...	...	4,674	...	127	
Total ...	11,991	1,351	...	13,342	...	317		
Násik ...	Násik... ..	61	...	...	61	...	46	
	Sinnar	86	...	...	86	...	27	
	Dindori	46	6	...	52	...	57	
	Niphád	...	96	...	96	...	229	
	Chandvád	150	...	...	150	...	...	
	Yeola... ..	1,173	260	...	1,433	...	385	
	Málegaon	459	310	...	769	...	234	
	Nándgaon	243	...	...	243	...	9	
Total ...	2,218	672	...	2,890	...	987		
Ahmednagar ...	Nagar... ..	366	36	...	402	...	187	
	Párner	533	4	...	537	...	57	
	Shrigonda	613	74	...	687	...	41	
	Karjat	76	62	...	138	...	48	
	Jámkhed	1,401	129	...	1,530	...	38	
	Shevgaon	120	287	...	407	...	48	
	Nevása	179	3	...	182	...	53	
	Ráhuri	129	1	...	130	...	104	
	Kópargaon	144	87	...	231	...	49	
	Sangamner	1,379	55	...	1,434	...	45	
	Akola... ..	80	...	...	80	...	...	
Total ...	5,020	738	...	5,758	...	670		

FORM No. 52—continued.

Division.	Name of Plantation,	AREA IN ACRES.				RE- CHARGES.	Remarks
		On 1st April 1886.	Added during the year.	Excluded during the year.	Area on 31st March 1886.	Of the year.	
		Acres.	Acres.	Acres.	Acres.	Rs.	
Poona ...	Junnar	955	10	...	965	...	56
	Indápur	2,073	328	...	2,401	...	99
	Khed	5,808	340	...	6,148	...	156
	A'mbegan	2,271	9	...	2,280	...	40
	Sirúr	5,251	404	...	5,655	...	173
	Purandhar	5,736	182	...	5,918	...	93
	Bhimthadi	2,885	439	...	3,324	...	103
	Báramati	1,599	305	...	1,904	...	97
	Haveli	1,312	72	...	1,384	...	151
	Mulshi	849	...	...	849	...	5
	Mával	1,116	...	...	1,116	...	4
	35,625 pits dug by guards at, say, 500 to the acre ...	...	72	...	72	...	...
	Total ...	29,855	2,161	...	32,016	...	977
Sátára ...	Málcómpet	1,725	1,799	...	3,524	...	...
	Shirála	61	23	...	84	...	...
	Sátára	251	147	...	398	...	...
	Mán	18	169	...	187	...	...
	Válva	1,159	665	...	1,824	...	...
	Khatáv	384	578	...	962	...	...
	Karád	5,919	597	...	6,516	...	...
	Tásgaon	786	117	...	903	...	...
	Khánápur	642	882	...	1,524	...	...
	Khandála	2,285	623	...	2,908	...	...
	Pátan	1,021	423	...	1,444	...	...
	Jávli	4,440	929	...	5,369	...	...
	Wái	8,387	8,993	...	17,380	...	...
	Koregaon	3,277	2,065	...	5,342	...	...
	Total ...	30,355	18,010	...	48,365	...	...
Sholápur ...	Sholápur	1,019	200	...	1,219	...	366
	Bársi	153	18	...	171	...	46
	Mádha	4,623	120	...	4,743	...	104
	Karmála	1,354	234	...	1,588	...	248
	Pandharpur	1,830	138	...	1,968	...	84
	Sángola	236	25	...	261	...	88
	Málsiras	714	132	...	846	...	176
	Total ...	9,929	867	...	10,796	...	1,112
Surat ...	Dangs	...	980	...	980	...	20
	Chorási	22	...	...	22	...	...
	Bulsár	29	4	...	33	...	2
	Párdi	28	4	...	32	...	2
	Chikhli	74	50	...	124	...	14
	Mándvi	102	265	...	367	...	21
	Railway strips from Vásad to Anand and Nadiád to river Shedi	5 miles.	...	...	5 miles.	...	...
	Total ...	255 5 miles.	1,303	...	1,558 5 miles.	...	59
Panch Maháls.	Godhra	170	76	...	246	...	...
	Kálol	28	16	...	44	...	...
	Hálol	32	18	...	50	...	...
	Dohad	22	22	...	44	...	...
	Jhálod	47	16	...	63	...	...
	Total ...	299	148	...	447	...	...
Total Cultural Operations...		1,00,113 5 miles.	27,957	...	1,28,070 5 miles.	...	4,213
Grand Total		1,03,488 5 miles.	29,217	429	1,32,276 5 miles.	...	7,314

Poona, 25th October 1887.

A. T. SHUTTLEWORTH,
Conservator of Forests, N. C.

FORM No. 53.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Trees felled by Government agency during the year 1886-87.
(Selection Fellings.)

Division.	TREES FELLED.		Remarks.
	Description.	Number.	
North Thána ... ..	.....	...	} There are no selection fellings in these divisions.
South Thána ... ..	.....	...	
East Khándesh	Teak	12,862	
	Anjan... ..	1,300	
	Bábul... ..	7,817	
	Salai	163	
	Bor	1,400	
	Khair	2,051	
	Miscellaneous	2,872	
	Total	28,465	
West Khándesh... ..	Teak	14,915	
	Tivas	522	
	Anjan... ..	4,132	
	Salai	4,934	
	Bábul	1,261	
	Miscellaneous... ..	46,240	
	Total	72,004	
Ahmednagar	Teak	16,809	
	Jambul	4,224	
	Bábul... ..	1,824	
	Total	22,857	
Násik ... ..	.....	...	
Poona	Teak	23,659	
	Miscellaneous	16,533	
	Total	40,192	
Sátára ... ..	.....	...	} There are no selection fellings in this division.
Sholápur ... ..	.....	...	
Surat	Teak	14,540	
	Bábul... ..	4,190	
	Sadada	2,523	
	Rajaloao	507	
	Total	21,760	
Panch Maháls ... ..	.....	...	
	Grand Total	1,85,278	
<i>Abstract of the Circle.</i>			
	Teak	82,785	
	Bábul... ..	15,092	
	Khair	2,051	
	Salai	5,097	
	Bor	1,400	
	Anjan... ..	5,432	
	Jambul	4,224	
	Tivas	522	
	Miscellaneous	68,675	
	Total	1,85,278	

A. T. SHUTTLEWORTH,

Conservator of Forests N. C.

Poona, 25th October 1887.

FORM No. 54.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Outturn of Timber and Firewood during the year 1886-87.

Division.	Description of Material.	OUTTURN IN CUBIC FEET.								Remarks.
		Selection Fellings.	Clearances.	Thinnings.	Total.	Removed by				
						Government Agency.	Purcha- sers.	Free Grants.	Right Holders.	
North Thána.	Teak pieces	...	...	1,72,625	1,72,625	80,326	92,299	...	...	
	Do. ... Cart-loads.	...	...	314	314	314	...	...	...	
	Tivas pieces	...	...	223	223	223	...	...	...	
	Ain rafters	...	...	6,931	6,931	6,931	...	...	...	
	Junglewood	...	...	10,514	10,514	9,523	359	632	...	
	Material for agricultural implements	...	...	3,612	3,612	3,612	...	...	...	
	Firewood ... Khandis.	...	...	3,939	3,939	...	3,939	...	...	
	Do. ... Cart-loads.	...	...	44,122	44,122	28,402	15,720	...	...	
	Do. ... Head-loads.	...	...	28,200	28,200	2,170	26,030	...	...	
	Charcoal ... Khandis.	...	...	K. m. lbs. 21 11 0	K. m. lbs. 21 11 0	K. m. lbs. 21 11 0	...	...	...	
	Do. ... Cart-loads.	...	...	53	53	...	53	...	...	
BámBUS	...	...	3,49,448	3,49,448	...	3,49,448	...	...		
Do. ... Cart-loads.	...	...	6,198	6,198	...	6,198	...	...		
Do. ... Head-loads.	...	...	12,922	12,922	...	12,922	...	...		
South Thána.	Teak pieces	...	94,152	...	94,152	92,008	1,478	666	...	
	Junglewood	...	3,148	...	3,148	2,849	299	...	...	
	Firewood ... Khandis.	...	13,459	...	13,459	11,670	1,789	...	...	
	Do. pieces	...	646	...	646	511	135	...	...	
	Do. ... Head-loads.	...	529	...	529	460	69	...	...	
	BámBUS	...	2,06,283	...	2,06,283	40	2,06,243	...	...	
	Do. ... Cart-loads.	...	222	...	222	...	222	...	...	
Do. ... Head-loads.	...	1,323	...	1,323	35	1,288	...	...		
East Khándesh.	Teak rafters... ..	30,064	...	...	30,064	30,064	...	...	...	
	Do. ... Cart-loads.	...	...	45	45	...	45	...	...	
	Do. ... Head-loads.	...	...	1,196	1,196	...	1,196	...	...	
	Do. ... Buffalo-loads.	...	...	33	33	...	33	...	...	
	Do. ... Bullock-loads.	...	...	15	15	...	15	...	...	
	Junglewood pieces ...	500	...	530	1,030	500	530	...	...	
	Do. ... Cart-loads.	...	...	998	998	...	998	...	...	
	Do. ... Head-loads.	...	...	6,937	6,937	...	6,937	...	...	
	Do. ... Buffalo-loads.	...	...	1,826	1,826	...	1,826	...	...	
	Do. ... Bullock-loads.	...	...	168	168	...	168	...	...	
	Firewood ... Khandis.	5,990	...	...	5,990	5,990	...	...	...	
	Do. ... Cart-loads.	...	...	22,903	22,903	...	22,903	...	...	
	Do. ... Head-loads.	...	...	9	9	...	9	...	...	
	Do. ... Bullock-loads.	...	...	2,305	3,305	...	2,305	...	...	
Do. ... Donkey-loads.	...	...	1,218	1,218	...	1,218	...	...		
Do. ... Horse-loads.	...	...	158	158	...	158	...	...		
BámBUS	...	...	1,77,238	1,77,238	...	1,77,238	...	...		
Do. ... Head-loads.	...	...	18,692	18,692	...	18,692	...	...		
Do. ... Bullock-loads.	...	...	4	4	...	4	...	...		
West Khándesh.	Teak pieces	34,208	634	...	34,842	33,124	460	174	...	1,084 remained unsold.
	Do. ... Cart-loads.	...	2,279	...	2,279	...	2,279	...	...	
	Do. ... Head-loads.	...	8,741	...	8,741	...	8,741	...	...	
	Tivas pieces	3,160	828	...	3,988	3,160	185	643	...	
	Junglewood pieces ...	...	17,515	...	17,515	65	99	17,351	...	
	Do. ... Cart-loads.	...	4,478	...	4,478	...	4,478	...	...	
	Do. ... Head-loads.	...	4,649	...	4,649	...	4,649	...	...	
	Firewood ... Khandis.	2,310	807	...	3,117	2,817	...	...	...	300 khandis re- mained unsold.
	Do. ... Cart-loads.	...	28	15,828	15,856	...	15,856	...	...	
	Do. ... Head-loads.	...	...	2	2	...	2	...	...	
Do. ... Donkey-loads.	...	...	623	623	...	623	...	...		
Charcoal ... Cart-loads.	...	15	...	15	...	15	...	...		
Do. ... Head-loads.	...	8,651	...	8,651	...	8,651	...	...		
Ahmed- nagar.	Teak rafters... ..	45,686	...	...	45,686	44,498	...	...	...	1,188 remained unsold.
	Jambul rafters	12,838	...	...	12,838	12,838	...	...	...	
	Firwood	1,484	...	...	1,484	1,484	...	...	...	
	BámBUS	...	...	43,692	43,692	...	43,692	...	...	
Násik.	Teak rafters... ..	...	1,57,638	...	1,57,638	1,25,114	17,769	2,011	...	12,744 rafters not removed.
	Firewood ... Khandis.	...	3,045	...	3,045	2,993	32	...	...	20 khandis not removed.
	Do. ... Cubic feet.	...	2,942	...	2,942	...	2,942	...	...	
	BámBUS	...	...	2,24,699	2,24,699	...	2,24,699	...	...	
	Do. ... Cart-loads.	...	...	1,498	1,498	...	1,498	...	...	
Do. ... Head-loads.	...	...	175	175	...	175	...	...		

FORM No. 54—continued.

Division.	Description of Materials.	OUTTURN IN CUBIC FEET.								Remarks.
		Selection Fellings.	Clearances.	Thinnings.	Total.	Removed by				
						Government Agency.	Purcha- sers.	Free Grants.	Right Holders.	
Poona.	Teak rafters	79,099	...	...	79,099	78,597	479	23	...	
	Junglewood rafters ...	10,457	...	...	10,457	9,227	509	721	...	
	Firewood ... Khandis.	7,550	...	...	7,550	7,022	323	205	...	
	Do. ... Cart-loads.	12	...	...	12	...	...	12	...	
	Bámbus	34,912	...	...	34,912	...	34,912	...	...	
Sátára.	Teak rafters	...	...	45,802	45,802	45,802	...	...	...	
	Junglewood rafters ...	...	9,726	6,255	15,981	7,017	8,314	650	...	
	Firewood ...Khandis.	...	324	2,624	2,948	2,810	138	...	...	
	Charcoal ... Do.	...	...	24	24	24	...	...	...	
	Bámbus	18,649	...	...	18,649	18,649	...	...	...	
Sho- lápúr.	Bábul pieces... ..	...	...	125	125	125	...	...	...	
	Sandalwood trees ...	...	105	...	105	...	105	...	...	
	Firewood Khandis.	...	...	530	530	405	125	...	...	
Surat.	Dry teak Khandis.	657	...	...	657	...	657	...	...	
	Green teak ... Do.	558	...	...	558	...	558	...	...	
	Teak pieces	14,152	...	616	14,768	13,149	1,003	616	...	
	Teak pieces ... Cart loads.	90	...	13	103	...	90	13	...	
	Haladvan ... Khandis.	90	...	...	90	...	90	...	...	
	Beo Do.	100	...	...	100	...	100	...	...	
	Tanach Do.	109	...	...	109	...	109	...	...	
	Sadada pieces	525	...	...	525	503	22	...	...	
	Do. ... Khandis.	280	...	...	280	...	280	...	...	
	Khair pieces	3	...	11	14	...	3	11	...	
	Do. ... Khandis.	33	...	...	33	...	33	...	...	
	Kánti	27	...	...	27	...	27	...	...	
	Junglewood pieces ...	20,546	...	...	20,546	...	20,546	...	...	
	Do. ...Cart-loads.	326	...	...	326	...	326	...	...	
	Firewood ... Khandis.	895	...	...	895	812	83	...	...	
	Do. ...Cart-loads.	3,756	...	...	3,756	216	3,540	...	...	
	Do. pieces	1,466	...	...	1,466	864	602	...	...	
	Do. ... Tons.	1,050	...	...	1,050	1,002	48	...	...	
	Bámbus	9,00,665	...	...	9,00,665	...	9,00,665	...	...	
	Do. ... Cart-loads.	403	...	1	404	...	403	1	...	
	Do. ...Head-loads.	2,961	...	...	2,961	...	2,961	...	...	
Panch Maháls.	Teak pieces	...	...	98,515	98,515	11,139	69,561	17,815	...	
	Do. ...Cart-loads.	...	...	15	15	7	...	8	...	
	Junglewood pieces ...	...	...	5,154	5,154	736	1,678	2,740	...	
	Firewood ... Khandis.	...	...	4,708	4,708	1,396	3,312	...	...	
	Do. ...Cart-loads.	...	...	1,322	1,322	15	1,307	...	...	
	Do. ...Head-loads.	...	...	5	5	5	...	...	...	
	Charcoal ... Cart-loads.	...	...	3	3	...	3	...	...	
	Do. ...Head-loads.	...	...	5	5	...	5	...	...	
Bámbus	...	...	46,410	46,410	...	46,410	...	...		

A. T. SHUTTLEWORTH,
Conservator of Forests, N. C.

Poona, 25th October 1887.

FORM No. 55.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Outturn of Minor Forest Produce.

Division.	Description of Produce.	PRODUCE REMOVED OR UTILIZED.									
		By Government Agency.		By Purchasers.		By Free Grants.		By Right Holders.		Total.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			Rs.		Rs.		Rs.		Rs.		Rs.
North Thana.	Apta, brab tree, and temburni leaves.	..	..	..	2,527	..	..	..	..	..	2,527
	Shembi and ain bark	843	1,655	..	805	..	..	..	..	843	1,940
	Karvi .. Cart-loads.	..	..	1,052	370	..	..	..	..	1,052	370
	Do. .. Head-loads.	..	..	2,090	62	..	..	..	..	2,090	62
	Rab material in cart-loads.	..	..	12	1	..	..	..	..	12	1
	Brab tree and mango fruits.	..	..	..	151	..	..	..	..	..	151
	Stone .. Cart-loads.	..	..	702	351	..	..	..	..	702	351
	Total ..	..	1,655	..	3,767	..	..	..	..	..	5,422
South Thana.	Hirda nuts .. Khandis.	172	2,544	..	63	..	..	..	..	172	2,607
	Karvi .. Cart-loads.	..	..	1,023	292	..	..	..	..	1,023	292
	Do. .. Head-loads.	..	..	1,141	36	..	..	..	..	1,141	36
	Teak, apta, and temburni leaves.	..	..	..	1,531	..	..	..	..	..	1,531
	Chilhari and shembi bark.	..	..	..	44	..	..	..	..	..	44
	Rab material in Head-loads.	..	..	150	1	..	..	..	..	150	1
	Thorns .. Cart-loads.	..	..	27	0	..	..	..	..	27	0
	Do. .. Head-loads.	..	..	24	1	..	..	..	..	24	1
	Stone .. Cart-loads.	..	..	15	4	..	..	..	..	15	4
	Mowra flowers and fruits	..	..	..	2,800	..	..	..	..	..	2,800
	Total ..	..	2,544	..	4,781	..	..	..	..	..	7,325
East Khandesh.	Stones .. Cart-loads.	..	..	100	0	..	..	..	..	100	0
	Do. .. Do.	..	..	1,292	238	..	..	..	..	1,292	238
	Limestones .. Do.	..	..	385	48	..	..	..	..	385	48
	Mango fruits ..	..	..	..	0	..	..	..	..	..	0
	Manure ..	..	..	..	1	..	..	..	..	..	1
	Total ..	..	..	..	302	..	..	..	..	..	302
West Khandesh.	Rosha grass stills	..	..	213	7,250	..	..	..	..	213	7,250
	Grass .. Cart-loads.	..	..	48	6	..	..	..	..	48	6
	Stone .. Do.	..	..	1,661	268	..	..	..	..	1,661	268
	Reed .. Do.	..	..	266	33	..	..	..	..	266	33
	Manure .. Do.	..	..	1,127	65	..	..	..	..	1,127	65
	Thorns .. Do.	..	..	858	96	..	..	..	..	858	96
	Earth .. Do.	..	..	115	19	..	..	..	..	115	19
	Anjan leaves ..	..	..	..	3	..	..	..	..	..	3
	Mango fruits ..	..	..	..	161	..	..	..	..	..	161
	Total ..	..	..	..	7,901	..	..	..	..	..	7,901
Ahmednagar.	Hirda nuts .. Khandis.	12	203	275	3,743	..	..	..	..	287	3,946
	Grazing ..	..	..	..	26,063	..	..	..	..	..	26,063
	Tarvad ..	..	..	..	564	..	..	..	..	..	564
	Teak and bhendi leaves	..	..	..	5	..	..	..	..	..	5
	Stone .. Cart-loads.	..	..	3,804	235	..	..	..	..	3,804	235
	Earth .. Do.	..	..	150	5	..	..	..	..	150	5
	Karvi .. Head-loads.	..	..	2,395	79	..	..	..	..	2,395	79
	Manure ..	..	..	..	20	..	..	..	..	..	20
	Thorns ..	..	..	83	7	..	..	..	..	83	7
	Reeds ..	..	..	..	27	..	..	..	..	..	27
	Fruit sales ..	..	..	..	47	..	..	..	..	..	47
	Total ..	..	203	..	30,795	..	..	..	..	..	30,998
Nasik.	Hirda nuts .. Khandis.	27	1,231	..	37,777	..	..	..	..	27	1,231
	Grazing ..	..	..	..	710	..	..	..	..	..	37,777
	Grass .. Cart-loads.	..	..	..	54	..	..	..	..	710	54
	Thorns .. Do.	..	..	..	162	..	..	..	..	683	162
	Rab material .. Do.	..	..	..	75	..	..	..	..	269	75
	Do. .. Head-loads.	..	..	..	50	..	..	..	..	961	50
	Karvi .. Head-loads.	..	..	10,244	340	..	..	..	..	10,244	340
	Grass oil furnaces ..	..	..	..	74	..	..	..	..	74	782
	Catechu ..	..	..	..	89	..	..	..	..	89	1,424
	Stone .. Cart-loads.	..	..	..	41	821	40	..	..	632	81
	Do. .. Heaps.	..	..	..	21	20	11	..	..	1,345	32
	Manure .. Cart-loads.	..	..	..	259	..	..	..	..	217	239
	Earth .. Do.	..	..	..	..	150	20	..	..	150	20
	Total ..	..	1,231	..	3,238	..	71	..	..	..	4,540
Poona.	Hirda nuts ..	169	1,582	..	46,591	..	55,000	..	..	169	1,532
	Grass and grazing by sale.	..	..	..	1,117	..	..	..	..	..	1,01,591
	Do. .. by fee system.	..	..	..	682	..	..	..	..	..	1,117
	Stone .. Cart-loads.	..	..	..	491	2,900	725	..	..	3,582	1,216
	Do. in cubic feet.	..	..	..	80,006	..	..	..	..	30,006	..
	Mango and tamarind fruits.	..	..	..	10	..	..	..	..	10	..
	Leaves of teak and other trees.	..	..	..	40	..	..	..	..	40	38
	Karvi, standing	..	..	..	118	..	..	..	..	118	881
	Shikakai ..	..	..	..	65	..	..	..	..	..	56
	Earth ..	..	..	..	4	..	..	..	..	..	7
	Roots of wild plantain trees.	..	..	..	500	..	..	..	..	500	4
	Palm tree (juice)	..	..	..	508	..	..	..	..	508	32
	Babul bark ..	..	..	..	47	..	..	..	..	..	47
	Rab .. Loads.	..	..	..	..	23,250	725	..	..	23,250	725
	Total ..	..	1,532	..	48,773	..	56,450	..	..	..	1,06,766

FORM No. 55—continued.

Division.	Description of Produce.	PRODUCE REMOVED OR UTILIZED.									
		By Government Agency.		By Purchasers.		By Free Grants.		By Right Holders.		Total.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			Rs.		Rs.		Rs.		Rs.		Rs.
Satara.	Grass and grazing by auction.	..	..	..	37,127	..	..	..	..	..	37,127
	Stone Cart-loads.	..	..	8,871	2,811	..	..	..	..	8,871	2,811
	Do. Head-loads.	..	..	4,871	..	..	..	..	..	4,871	..
	Hirda nuts	281	..	..	..	..	..	..	..	281	..
	Shikakái	70	..	..	..	..	..	..	..	70	..
	Thorns Bundles.	915	10,309	..	..	..	..	..	..	915	10,309
	Teak leaves	5	..	..	..	..	..	..	..	5	..
	Total	..	10,309	..	39,938	..	..	..	..	..	50,247
Sholapur.	Bábul bark	3	17	..	..	..	..	..	..	3	17
	Teak leaves	..	..	..	2	..	..	..	..	..	2
	Gum	..	..	..	21	..	..	..	..	..	21
	Earth	..	..	..	1	..	..	..	..	..	1
	Tamarind fruits	..	..	..	6	..	..	..	..	..	6
	Total	..	17	..	30	..	..	..	..	..	47
Surat.	Grass by auction	..	..	..	528	..	..	..	..	..	528
	Do. by fee system	..	..	..	744	..	..	..	..	..	744
	Mowra flowers	..	..	1,161	163	..	..	..	..	1,161	163
	Do. Cart-loads.	..	..	20	20	..	..	..	..	20	20
	Grass Do.	..	..	476	130	..	..	..	..	476	130
	Bámbu mats	..	..	3,249	107	..	..	..	..	3,249	107
	Ashindra leaves Bundles.	..	..	9,61,926	194	..	..	..	..	9,61,926	194
	Temburni leaves Cart-loads.	..	..	327	191	..	..	..	..	327	191
	Honey and wax Maunds.	..	..	171	67	..	..	..	..	171	67
	Sadada bark Maunds.	..	..	271	17	..	..	..	..	271	17
	Catechu furnaces	..	..	..	825	..	..	..	..	..	825
	Total	..	..	..	2,984	..	..	..	..	..	2,984
Panch Mahals.	Grass sales	..	..	..	2,376	..	..	..	..	..	2,376
	Grazing fees	..	..	..	4,688	..	..	..	..	..	4,688
	Stone Cart-loads.	..	..	17,649	114	..	..	..	..	17,649	114
	Sand	..	..	45,681	57	..	..	..	..	45,681	57
	Mowra flowers	..	..	..	2,305	..	..	..	..	..	2,305
	Thorns Cart-loads.	4	1	26	7	..	..	..	..	32	8
	Seed	40	119	..	..	..	..	..	..	69	119
	Atedi bark Bags.	14	9	..	..	..	..	..	..	14	9
	Wax	..	..	..	..	..	..	..	..	..	..
	Honey	..	..	..	89	..	..	..	..	..	89
	Mango fruits	..	..	..	..	..	..	..	..	..	..
	Total	..	129	..	9,636	..	..	..	..	..	9,765

A. T. SHUTTLEWORTH,
Conservator of Forests, N. C.

Poona, 25th October 1887.

Particulars.	TOTAL OF EACH HEAD.		Cubic Feet.	Number or Quantity.	Particulars.	TOTAL OF EACH HEAD.		Cubic Feet.	Number or Quantity.	TOTAL OF EACH HEAD.
	Number or Quantity.	Cubic Feet.				Number or Quantity.	Cubic Feet.			
Balance at commencement of the year.										
North Thána ... { Teak firewood ... Firewood ... Charcoal ...	Carts 275	 6,380 0 0 21 0 0	K. m. lbs.		FIREWOOD. Sold locally.			K. m. lbs.		K. m. lbs.
South Thána ... { Firewood ... Do. heaps	..... ..... .....	6,166 12 0		275	Teak firewood Cart-loads. Do. No. Junglewood firewood Cart-loads. Do. Head-loads. Teak chippings Cart-loads. Teak and junglewood pieces fit for firewood. No. Firewood pieces Firewood heaps Bullock loads of firewood Firewood Miscellaneous	7,556 1,637 11,896 2,635 7 109 522 284 255 9,227	1,058 17 0 Tons. 1,013 K.			
West Khândesh ... East Khândesh ... Násik ... Ahmednagar ... Sátára ... { Firewood ... Charcoal ...	..... ..... ..... ..... ..... ..... .....	2,554 0 0 980 0 0 75 0 0 219 1 11 181 21 0 23 14 14		284	Junglewood firewood Firewood Charcoal	151	50,457 3 9 29 1 24		53,360 22 54	
Surat ... Panch Maháls ... Do. ...	Carts 100	Tons 952 9,124 0 0		.....	Removed by Purchasers from Depôts. Firewood Firewood Charcoal ... .. ..	..... ..... .....	1,924 0 0 1,191 9 0 15 10 4		1,924 0 0 57 10 0 1,206 19 4	
Total Balance	.....	.....		Carts 375 Heaps 284	Carried to Depôts. Firewood Charcoal Lost or written off. Firewood Firewood Charcoal Used by the D. department. Firewood Charcoal	<				

South Thána	Firewood	...	....	4,835 11 0	....	4,835 11 0
West Khándesh	Do.	...	....	530 0 0	....	530 0 0
Ahmednagar	Do.	...	....	62 10 12	....	62 10 12
Násik	Do.	...	1,100	20 0 0	1,100	20 0 0
Sátára	Do.	...	....	179 5 0	....	179 5 0
Do.	Charcoal	...	....	13 0 0	....	13 0 0
Surat	Teak firewood	...	Carts 550	Tons 151	....	192 5 0
	Sadada do.	...	" 250	....	....	
	Junglewood do.	...	" 196	315 0 0	996 carts	K. Tons. 315 151
Panch Maháls	Firewood	...	....	1,311 0 0	....	1,311 0 0
Total Balance		...	....	....	....	7,265 26 12 Tons 151
Total		...	....	....	39,418½	63,842 7 17½ Tons 1,164

Total

K. m. lbs.
63,842 7 17½
Tons 1,164

Balance at commencement of the year.

Sátára ... BámBUS.
Panch Maháls ... Do.

Total

Received from the Forests in Depôts.

BámBUS ... No.
Do. ... Head-loads
Do. ... Carts.

BAMBUS.

Sold locally.

BámBUS	...	...	...	...	9,169 99	....	9,268
Do.	...	...	...	Head-loads	...	....	639
Removed by Purchasers.							
BámBUS	...	...	...	...	639	....	14,521
Supplied to Salt Department.							
BámBUS	...	...	...	...	14,521	....	132
Used by the Department.							
BámBUS	...	...	...	...	132	....	10,976
Carried to Depôts.							
BámBUS	...	...	...	...	10,976	....	35,536

Particulars.	Number or Quantity.	TOTAL OF EACH HEAD.		Particulars.	Number or Quantity.	Cubic Feet.	TOTAL OF EACH HEAD.	
		Number or Quantity.	Cubic Feet.				Number or Quantity.	Cubic Feet.
BAMBUS—continued.								
<i>Balance at close of the year.</i>								
Sátára.	10,251			...Bámbus ...	10,251	.....		
Panch Maháls	35			... Do. ...	35	.....		
				Total Balance ...	.....	.....		
Total ...		45,822.	.....	Total ...	45,822	.....		
OTHER MINOR PRODUCE.								
<i>Balance at commencement of the year.</i>								
South Thána... { Hirda ...	.....	40 21 11	.....	Cart-loads of thorns ...	245	.....	K. m. lbs.	
... { Dhávda leaves ...	.....	0 6 0	.....	Kada pods ...	6	.....		
Násik ... { Seed ...	.....	4 23 2½	.....	Atedi bark ...	14	.....		
... { Hirda ...	.....	5 13 5	.....	Thorn ...	6	.....		
Ahmednagar ... { Hirda ...	.....	49 9 21	.....	Do. ...	965	.....		
... { Seed ...	.....	27 21 1	.....	Zitá ...	6	.....		
Poona ... { Hirda... ..	.....	138 22 25	.....	Teak leaves ...	5	.....		
Sátára... { Hirda ...	.....	229 0 11½	.....	Dhávda... ..	57	.....		
... { Seed ...	.....	12 10 9	.....	Do. ...	81	.....		
Surat ... { Shigekái ...	.....	70 7 6½	.....	Karvi ...	6	.....		
... { Hirda ...	.....	225	225	Do. ...	2,043	.....		
Panch Maháls... Seed ...	.....	1 1 4½	.....	Táhal ...	201	.....		
Total ...	.....	.....	225	Do. ...	.....	3 8 0		
				Bábul bark ...	.....	343 0 0		
				Ain bark ...	.....	8 19 20		
				Corn ...	.....	76 2 3½		
				Shikakái ...	.....	1,129 17 5½		
				Hirda ...	1,000	.....		
				Grass ...	.....	.....		
				Total ...	.....	.....	4,635	K. m. lbs. 1,560 19 1
<i>Received from the Forests in Depôts.</i>								
Cart-loads of thorns ...	212	.....	.....	Hirda ...	.....	95 20 23½		
Kada pods ...	6	.....	.....	Shikakái ...	.....	18 10 7		
Atedi bark ...	14	.....	.....	Dhávda leaves ...	.....	0 6 0		
				Total ...	.....	.....		

FORM No. 57.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Abstract showing the Value of Timber and other Produce at Sale Depôts for the year 1886-87

Description of Timber and other Produce.	ON HAND AT COMMENCEMENT OF THE YEAR.			ON HAND AT CLOSE OF THE YEAR.			DIFFERENCE IN VALUE.		Remarks.
	No.	Khandis.	Value.	No.	Khandis.	Value.	In favour of the year.	Against the year.	
<i>North Thána.</i>		K. m. s.	Rs.		K. m. s.	Rs.	Rs.	Rs.	
Teak pieces ...	8,918		3,000	9,344		2,500	}	1,753	20
Ain do. ...	80	.....	10	...	.....	...			
Miscellaneous jungle wood pieces...	1,099	.....	200	563	.....	200			
Material for agriculture implements ...	1,039	.....	200	1,259	.....	300			
Charcoal ...	...	21 0 0	20	...	.....	...			
Teak firewood ... Cart-loads.	275	.....	275	...	.....	...			
Junglewood firewood...	...	6,380 0 0	3,030	...	2,948 0 0	1,800			
Do. fire wood pieces ...	...		...	25		2	}		
Ain bark ...	...	.....	...	36	.....	180			
Total ...	...		6,735	...		4,982	...	1,753	
<i>South Thána.</i>									
Teak pieces ...	27,257		11,000	9,200		4,600	}	10,004	
Firewood ...	...	6,166 12 0	3,000	...	4,835 11 0	205			
Do. ...	284 ³ / ₄	.....	...	...	.....	...			
Hirda nuts ...	...	40 21 11	815	...	0 12 6	...			
Miscellaneous seed ...	...	4 24 2 ¹ / ₂	...	...	14 21 5	6			
Dáhyda leaves ...	...	0 6 0	...	...		...	}		
Total ...	...		14,815	...		4,811	...	10,004	
<i>East Khándesh.</i>									
Teak rafters ...	6,151		1,107	...		...	}	1,107	
Tivas do. ...	233	.....	50	...	.....	...			
Sisu do. ...	248	.....	100	...	.....	...			
Firewood ...	...	980 0 0	367	...	...	...			
Seed ...	...	.....	...	...	5 2 10	...			
Total ...	...		1,624	...		...	...	1,624	
<i>West Khándesh.</i>									
Teak rafters ...	6,232		623	1,653		10	}	2,424	
Do. logs ...	1,297	.....	648	...	.....	...			
Do. kadies ...	3,933	.....	196	...	.....	...			
Do. pieces ...	575	.....	28	1,056	.....	52			
Do. square pieces ...	579	.....	57	...	.....	...			
Ain logs ...	5		20	5		20	}		
Firewood ...	...	2,554 0 0	1,277	...	530 0 0	343			
Total ...	...		2,849	...		425	...	2,424	
<i>Ahmednagar.</i>									
Teak rafters ...	11,830		347	3,744		...	}	165	
Firewood ...	...	296 4 5	...	...	62 10 12	182			
Jambul rafters ...	...	.....	...	4,575	.....	...			
Seed ...	...	.....	...	...	14 7 22	...			
Total ...	...		347	...		182	...	165	
<i>Násik.</i>									
Teak rafters ...	4,465		905	11,644		1,530	}	325	As of thorns
Firewood ...	...	75 0 0	40	1,100	20 0 0	20			
Hirda ...	...	5 13 5	350	...	1 18 24	70			
Total ...	...		1,295	...		1,620	325	...	As of thorns

FORM No. 57—continued.

Description of Timber and other Produce.	ON HAND AT COMMENCEMENT OF THE YEAR.			ON HAND AT CLOSE OF THE YEAR.			DIFFERENCE IN VALUE.		Remarks.
	No.	Khandis.	Value.	No.	Khandis.	Value.	In favour of the year.	Against the year.	
<i>Poona.</i>		K. m. s.	Rs.		K. m. s.	Rs.	Rs.	Rs.	
Irda ...	...	138 22 25	2,065	...	1 16 20	...	...	2,065	
Total ...	...		2,065	...		...	...	2,065	
<i>Sátara.</i>									
Junglewood logs ...	7,295		900	1,077		1,000	}	...	...
Firewood ...	...	181 21 0	180	...	179 5 0	175			
Charcoal ...	...	23 14 14	120	...	13 0 0	75			
Irda ...	...	229 0 11 ¹ / ₄	1,000	...	145 7 3 ¹ / ₂	950			
Chikakái ...	...	70 7 6 ¹ / ₂		...	...	...			
Seed ...	...	12 10 9	...	...	25 26 26	...	}	...	...
Ambs ...	11,277	.....	100	10,251	.....	100			
Total ...	...		2,300	...		2,300	...	...	
<i>Sholapur.</i>									
Nil.	...		...	...		...	...	...	
<i>Surat.</i>									
Teak pieces ...	...		...	30,461		23,500	}	21,675	...
Sadada pieces ...	...	.....	...	2,002	.....	1,000			
Rajalu do. ...	...	.....	...	696	.....	300			
Firewood ...	...	Tons. 952 0 0	4,760	...	Tons. 151 0 0	715			
Thorns.. ...	225	Carts.	21	186	.....	...			
Teak firewood...	...	K. m. s. 75 0 0	44	550		550	}	...	...
Ain Rajalu firewood ...	...	.....	...	446	Kh. m. s. 315 0 0	435			
Total ...	...		4,825	...		26,500	21,675	...	
<i>Panch Maháls.</i>									
Teak beams ...	136		600	8		16	}	...	7,492
Do. poles ...	111	.....	82	83	.....	79			
Do. rafters, 1st class .	822	.....	149	870	.....	110			
Do. do. 2nd class.	10,686	.....	705	1,468	.....	78			
Do. pieces ...	26	.....	35	210	.....	100			
Do. do. ...	...		...	Carts. 7		21	}	...	7,492
Miscellaneous pieces ...	2	.....	3	19	.....	13			
Teak rafters ...	61	.....	10	...	.....	...			
Ambs ...	13	.....	...	Carts. 35	.....	70			
Firewood ...	...	9,124 0 0	7,100	...	1,311 0 0	650			
Seed ..	...	0 29 0 ³ / ₄	29	...	0 19 3 ¹ / ₄	19	}	...	7,492
Teak posts ...	...	.....	...	13	.....	10			
Miscellaneous poles ...	...	.....	...	30	.....	15			
Do. rafters...	...	.....	...	360	.....	16			
Do. posts ...	...	.....	...	46	.....	22			
Thorns ...	...		...	Carts. 6		2	}	...	7,492
Total ...	...		8,713	...		1,221	...	7,492	

Net difference against the year—Rs. 3,527

A. T. SHUTTLEWORTH,
Conservator of Forests, N. C.

Poona, 25th October 1887.

FORM No. 57A.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Abstract showing the Value of Live and Dead Stock for the year 1886-87.

Description of Live and Dead Stock.	ON HAND AT COMMENCEMENT OF THE YEAR.		ON HAND AT CLOSE OF THE YEAR.		DIFFERENCE IN VALUE.		Remarks.
	Number.	Value.	Number.	Value.	In favour of the year.	Against the year.	
		Rs.		Rs.	Rs.	Rs.	
<i>North Thána Division.</i>							
Tungár bungalow ...	1	1,200	1	1,200	...	...	Removed to Parol.
Náka-house at Mándvi ...	1	250	1	250	...	...	
Forest stations ...	...	...	38	570	...	...	
Do. posts ...	...	...	82	820	...	...	
Office tent ...	1	273	1	273	...	...	
Tools, plant and office furniture ...	...	2,066	...	2,648	...	...	
Total ...	...	3,789	...	5,761	1,972	...	
<i>South Thána Division.</i>							
Office tent ...	1	273	1	273	...	...	
Small rowties ...	...	...	2	186	...	...	
Tools, plant and office furniture ...	...	233	...	455	...	...	
Total ...	...	506	...	914	408	...	
<i>East Khándesh Division.</i>							
Office tent ...	1	248	1	248	...	...	
Rowtie ...	1	100	1	100	...	...	
Tools, plant and office furniture ...	...	83	...	473	...	...	
Total ...	...	431	...	821	390	...	
<i>West Khándesh Division.</i>							
Office rowti ...	1	85	1	85	...	...	
Tools, plant and office furniture ...	...	405	...	429	...	...	
Total ...	...	490	...	514	24	...	
<i>Násik Division.</i>							
Office tents ...	2	300	2	300	...	...	
Tools, plant and office furniture ...	...	229	...	229	...	...	
Total ...	...	529	...	529	...	...	
<i>Ahmednagar Division.</i>							
Sleeping pal 12' x 12', double fly.	1	246	1	246	...	...	
Office-room, Range Forest Officer, Karjat ...	1	214	1	214	...	...	
Hirda depôt, Shinganvádi ...	1	25	1	25	...	...	
Forest rest-houses ...	3	90	3	90	...	...	
Tools, plant and office furniture ...	...	1,958	...	2,045	...	...	
Total ...	...	2,533	...	2,620	87	...	
<i>Sholápur Division.</i>							
Office tent ...	...	...	1	100	...	...	
Tools, plant and office furniture ...	...	231	...	231	...	...	
Total ...	...	231	...	331	100	...	

FORM No. 57A—continued.

Description of Live and Dead Stock.	ON HAND AT COMMENCEMENT OF THE YEAR.		ON HAND AT CLOSE OF THE YEAR.		DIFFERENCE IN VALUE.		Remarks.	
	Number.	Value.	Number.	Value..	In favour of the year.	Against the year.		
<i>Sátara Division.</i>								
Bungalow at Málcómpeth ...	1	700	1	700	...	...	Value cannot be found. Do. do. Do. do.	
Pall with double fly ...	1	245	1	245	...	...		
Tools, plant and office furniture .	...	602	...	616	...	...		
Total ...	...	1,547	...	1,561	14	...		
<i>Poona Division.</i>								
Office tent ...	...	...	1	273	...	...		
Tools, plant and office furniture .	...	...	...	345	...	...		
Total ...	...	...	...	618	...	...		
<i>Surat Division.</i>								
Office tent, 12 feet ...	1	246	1	246	...	...		
Large Lilápur bungalow ...	1	...	1	...	...	...		
Small do. do. ...	1	...	1	...	...	...		
Gandewa bungalow ...	1	...	1	...	...	...		
Andhatri do. ...	1	291	1	291	...	...		
Dadhwáda do. ...	1	30	1	30	...	...		
Large Waghai bungalow ...	1	1,099	1	1,099	...	...		
Small do. do. ...	1		1		...	...		
Large Pimpri do. ...	1	499	1	499	...	...		
Do. Garvi do. ...	1	1,012	1	1,012	...	...		
Small do. do. ...	1	288	1	288	...	...		
Tools, plant and office furniture .	...	1,950	...	1,964	...	...		
Total ...	...	5,421	...	5,429	8	...		
<i>Panch Maháls Division.</i>								
Rest-houses and depôts ...	3	153	20	1,853	...	...		
Bungalow ...	1	8,200	1	8,200	...	...		
Office rowtie with carpets ...	1	273	1	273	...	...		
Tools, plant and office furniture .	...	495	...	906	...	...		
Total ...	...	9,121	...	11,232	2,111	...		
<i>Working Plans Division.</i>								
Office tent ...	...	...	1	285	...	...		
Tools, plant and office furniture .	...	...	...	1,022	...	...		
Total ...	...	...	...	1,307	1,307	...		
<i>Direction.</i>								
Office tent, 14' x 14' ...	1	432	1	432	...	...		
Office rowtie ...	1	95	1	95	...	...		
Tools, plant and office furniture .	...	128	...	128	...	...		
Total ...	...	655	...	655	...	...		

A. T. SHUTTLEWORTH,
Conservator of Forests, N. C.

Poona, 25th October 1887.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Summary of Revenue and Expenditure of the different Divisions during the year 1886-87.

Budget Heads.	Direction.	Ahmednagar Division.	East Khandesh Division.	West Khandesh Division.	Nasik Division.	Panch Mahals Division.	Poona Division.	Satara Division.	Sholapur Division.	Surat Division.	North Thana Division.	South Thana Division.	Working Plans Division.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
REVENUE.														
<i>I.—Timber and other Produce removed from the Forests by Government agency—</i>														
a. Timber	...	8,411 13 1	7,855 14 11	10,717 13 7	36,894 14 5	9,324 5 11	19,406 7 6	12,000 5 5	160 14 0	8,820 0 7	66,072 3 7	55,533 10 10	...	2,35,908 7 10
b. Firewood and charcoal	...	1,440 12 6	4,497 8 0	3,622 14 0	2,212 11 3	2,783 4 0	13,229 14 0	3,345 8 6	733 2 6	6,414 15 0	18,070 14 9	9,067 10 6	...	65,419 3 0
c. Bamboos	...	...	0 1 6	...	...	1,054 3 0	...	232 3 6	...	...	...	...	...	1,346 8 0
d. Sandalwood	...	0 11 0	...	...	...	...	...	3 9 6	...	...	...	...	...	4 4 6
e. Grass and other minor produce	...	3,747 0 6	...	...	1,235 4 10	...	3,560 12 3	10,309 4 2	17 6 3	...	1,667 2 11	3,461 9 8	...	24,001 8 7
<i>II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—</i>														
a. Timber	...	77 7 10	2,442 4 3	16,266 7 9	17,145 11 2	23,932 6 8	124 1 6	891 12 7	34 15 3	29,701 5 4	81,671 1 3	14,269 11 9	...	1,86,617 5 4
b. Firewood and charcoal	...	410 2 0	6,127 5 6	4,438 7 6	1,048 8 2	732 5 0	665 11 6	205 13 3	197 5 9	1,724 13 9	16,796 10 5	955 1 2	...	33,362 4 0
c. Bamboos	...	438 5 0	4,337 10 11	2,473 7 3	4,075 3 0	422 2 6	369 9 0	298 11 3	...	17,403 13 5	11,774 10 3	5,109 14 8	...	46,763 7 3
d. Grazing and fodder grass	...	27,199 12 11	26,953 7 6	32,411 0 0	37,831 5 0	7,564 1 0	47,707 11 9	37,156 8 0	5,732 2 0	1,274 13 0	9,978 8 0	2,316 5 8	...	2,37,125 13 7
e. Other minor produce	...	1,004 1 9	301 8 6	7,886 9 0	3,648 12 7	2,619 14 3	1,402 4 9	2,811 7 6	34 6 0	1,851 5 1	3,775 11 7	4,362 3 3	...	29,838 4 3
<i>III.—Confiscated, Drift, and Waif Wood</i>														
	...	350 13 1	230 7 6	1,494 3 0	309 11 2	45 0 10	430 11 6	38 6 11	7 12 9	819 13 2	2,207 2 0	1,698 11 0	...	7,682 11 11
<i>IV.—Revenue from Forests not managed by Government.</i>														
a. Duty on foreign timber and other forest produce	...	...	8,299 13 0	9,775 7 6	310 7 9	...	...	...	...	...	...	0 0 5	...	18,355 12 8
b. Revenue from shared and private forests	...	...	...	...	...	231 9 0	1,229 4 0	12 4 0	...	94 13 2	2,332 14 9	2,100 5 4	...	6,051 2 3
<i>V.—Miscellaneous—</i>														
a. Fines and forfeitures	...	2 7 2	10 0 8	...	436 0 6	61 10 9	924 13 3	105 9 9	142 3 3	35 0 0	111 1 7	2,490 3 7	...	4,995 2 6
b. Refunds	...	50 8 1	8 8 11	2 7 10	32 13 6	441 9 10	213 3 9	25 14 7	...	6 7 7	10 7 7	18 4 3	...	310 5 11
c. Other sources	25 4 0	982 15 0	824 3 2	804 2 0	1,355 2 3	1,042 0 1	966 12 9	883 9 3	332 10 9	1,576 13 1	4,719 6 1	1,934 11 6	...	15,367 9 11
Total Revenue	25 4 0	44,116 12 11	61,883 14 4	90,902 15 5	1,06,586 9 7	50,424 8 10	89,928 5 6	69,101 0 2	7,392 15 3	69,704 3 3	2,19,187 14 9	1,03,841 7 7	...	9,13,100 15 6
EXPENDITURE.														
<i>A.—CONSERVANCY AND WORKS.</i>														
<i>I.—Timber and other Produce removed from the Forests by Government agency—</i>														
a. Timber	...	1,188 14 9	1,778 4 6	2,767 7 6	5,735 3 4	514 14 8	1,889 3 6	1,855 15 6	14 0 3	2,683 2 4	11,811 14 7	16,588 1 9	...	46,777 2 8
b. Firewood and charcoal	...	159 11 9	1,793 3 0	989 9 0	690 5 0	211 2 0	1,093 5 6	1,154 4 9	98 14 0	462 9 0	6,476 0 10	672 14 8	...	13,593 13 6
c. Bamboos	...	...	...	...	...	...	...	136 11 11	...	...	...	...	...	357 13 11
d. Sandalwood	...	...	...	...	...	...	...	...	...	...	...	...	...	...
e. Grass and other minor produce	...	1,455 15 3	...	...	1,116 15 3	...	...	5,527 11 5	0 11 0	...	204 15 3	1,237 12 0	...	10,443 14 3
<i>II.—Timber and other Produce removed from the Forests by Consumers or Purchasers</i>														
	...	688 1 6	167 13 9	118 5 8	711 12 4	673 9 9	809 14 1	298 1 11	...	1,957 10 4	4,715 12 5	1,325 5 4	...	10,647 13 0
<i>III.—Confiscated, Drift, and Waif Wood</i>														
	...	9 8 5	6 6 4	0 6 7	16 13 6	...	6 10 0	1 5 0	...	6 10 11	38 0 8	7 3 3	...	93 0 5

[illegible]

GODREZJI D. PUDUMJI,
for Accountant General.

Forwarded to the Commissioner of Forests
Northern Circle, under Section 238 of the Forest Department Code.
NO. 12106.

No. ^F 12106

Bombay, 10th August 1887.

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
To Cash Balance	...	...	...	...	...
I. Land Revenue—	...	...	...	...	...
IX. Forests (Revenue as per Annual Summary Form No. 58)	...	...	...	...	...
VIII. Assessed Taxes—	...	...	...	...	...
XXI. Interests—	...	...	...	...	...
XXIII. Stationery and Printing—	...	...	...	...	...
Other Press Receipts—	...	...	...	...	...
Revenue Deposits—	...	...	...	...	...
Forest Deposits—	...	...	...	...	...
Advances Repayable—	...	...	...	...	...
Forest Advances	...	...	...	...	...
Tentage Advances to Gazetted Officers	...	...	...	...	...
Objection Book Advances	...	...	...	...	...
Cash Recoveries	...	...	...	...	...
Cheques and Bills—	...	...	...	...	...
Departmental Cheques—Forest	...	...	...	...	...
Remittances to Treasuries	...	...	...	...	...
Inter-Divisional Transfers	...	...	...	...	...
Inter-Departmental Transfers	...	...	...	...	...
Suspense Account	...	...	...	...	...
Account between Bombay and Military—Bombay—	...	...	...	...	...
IV. Items adjustable by Military—	...	...	...	...	...
Miscellaneous	...	...	...	...	...
Account between Bombay and Public Works Department—	...	...	...	...	...
(Ordinary Branches)—Bombay—	...	...	...	...	...
IV. Items adjustable by Public Works Department—	...	...	...	...	...
Inter-Departmental Charges to Public Works Department	...	...	...	...	...
Account between Bombay and Public Works Department	...	...	...	...	...
(Railway Branches)—Bombay—	...	...	...	...	...
IV. Items adjustable by Public Works Department—	...	...	...	...	...
Inter-Departmental Charges to Public Works Department	...	...	...	...	...
Suspense Account	...	...	...	...	...
Cash Balance	...	...	...	...	...
Total	...	...	...	...	...

No. $\frac{F.}{12100.}$

Forwarded to the Conservator of Forests, Northern Circle, under Section 238 of the Forest Code.

*Bombay, Accountant General's Office, }
10th August 1887.*

GODREZJI D. PUDUMJI,
for Accountant General

FORM No. 60.

FORM No. 60.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Revenue received and Outstandings on account of Revenue during 1886-87.

Division.	Particulars.	Outstandings at commencement of year.	Value of Sales and other Revenue during year.	Total.	Amount realized during year.	Balance due to the Department at end of year.	Remarks.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
North Thána ...	<i>I.—Timber and other produce removed from the forests by Government agency—</i>						
	a. Timber ...	.....	66,086 3 7	66,086 3 7	66,072 3 7	14 0 0	
	b. Firewood and charcoal ...	.....	18,070 14 9	18,070 14 9	18,070 14 9	.....	
	c. Bámbus ...	.....	.....	.....	.....	.....	
	d. Sandalwood ...	.....	.....	.....	.....	.....	
	e. Grass and other minor produce ...	.....	1,667 2 11	1,667 2 11	1,667 2 11	.....	
	<i>II.—Timber and other produce removed from the forests by consumers and purchasers—</i>						
	a. Timber ...	.....	81,671 1 3	81,671 1 3	81,671 1 3	.....	
	b. Firewood and charcoal ...	.....	16,796 10 5	16,796 10 5	16,796 10 5	.....	
	c. Bámbus ...	.....	11,774 10 3	11,774 10 3	11,774 10 3	.....	
South Thána ...	d. Grazing and fodder grass ...	.....	9,978 8 0	9,978 8 0	9,978 8 0	.....	
	e. Other minor produce ...	.....	3,775 11 7	3,775 11 7	3,775 11 7	.....	
	<i>III.—Confiscated, drift, and waif wood</i>						
		.....	2,207 2 0	2,207 2 0	2,207 2 0	.....	
	Total ...	.....	2,12,028 0 9	2,12,028 0 9	2,12,014 0 9	14 0 0	
	<i>I.—Timber and other produce removed from the forests by Government agency—</i>						
	a. Timber ...	1 0 0	55,582 10 10	55,583 10 10	55,583 10 10	.....	
	b. Firewood and charcoal ...	.....	9,067 10 6	9,067 10 6	9,067 10 6	.....	
	c. Bámbus ...	.....	.....	.....	.....	.....	
	d. Sandalwood ...	.....	.....	.....	.....	.....	
	e. Grass and other minor produce ...	.....	3,464 9 8	3,464 9 8	3,464 9 8	.....	
South Thána ...	<i>II.—Timber and other produce removed from the forest by consumers and purchasers—</i>						
	a. Timber ...	66 9 0	14,269 11 9	14,336 4 9	14,269 11 9	66 9 0	
	b. Firewood and charcoal ...	.....	955 1 2	955 1 2	955 1 2	.....	
	c. Bámbus ...	.....	5,169 14 8	5,169 14 8	5,169 14 8	.....	

d. Grazing and fodder grass...	.....	2,316 5 8	2,316 5 8	.....	.....
e. Other minor produce ...	.....	4,862 3 3	4,862 3 3	.....	.....
III.—Confiscated, drift, and waif wood	.....	1,698 11 0	1,698 11 0	.....	.....
Total	67 9 0	97,386 14 6	97,454 7 6	97,387 14 6	66 9 0
I.—Timber and other produce removed from the forests by Government agency—					
a. Timber ...	.....	10,717 13 7	10,717 13 7	10,717 13 7	.....
b. Firewood and charcoal ...	.....	3,622 14 0	3,622 14 0	3,622 14 0	.....
c. Bámbus ...	.....	.....	.....	.....	.....
d. Sandalwood ...	.....	.....	.....	.....	.....
e. Grass and other minor produce	.....	.....	.....	.....	.....
II.—Timber and other produce removed from the forests by consumers and purchasers—					
a. Timber ...	.....	16,266 7 9	16,266 7 9	16,266 7 9	.....
b. Firewood and charcoal ...	.....	4,438 7 6	4,438 7 6	4,438 7 6	.....
c. Bámbus ...	.....	2,473 7 3	2,473 7 3	2,473 7 3	.....
d. Grazing and fodder grass...	1,648 11 5	33,356 4 6	35,004 15 11	33,411 0 0	1,593 15 11
e. Other minor produce ...	.....	7,896 9 0	7,896 9 0	7,896 9 0	.....
III.—Confiscated, drift, and waif wood	.....	1,494 3 0	1,494 3 0	1,494 3 0	.....
Total	1,648 11 5	80,266 2 7	81,914 14 0	80,320 14 1	1,593 15 11
I.—Timber and other produce removed from the forests by Government agency—					
a. Timber ...	.....	7,855 14 11	7,855 14 11	7,855 14 11	.....
b. Firewood and charcoal ...	.....	4,497 8 0	4,497 8 0	4,497 8 0	.....
c. Bámbus ...	.....	0 1 6	0 1 6	0 1 6	.....
d. Sandalwood ...	.....	.....	.....	.....	.....
e. Grass and other minor produce	.....	.....	.....	.....	.....
II.—Timber and other produce removed from the forests by consumers and purchasers—					
a. Timber ...	.....	2,442 4 3	2,442 4 3	2,442 4 3	.....
b. Firewood and charcoal ...	.....	6,127 5 6	6,127 5 6	6,127 5 6	.....
c. Bámbus ...	.....	4,337 10 11	4,337 10 11	4,337 10 11	.....
d. Grazing and fodder grass	113 10 0	26,937 12 6	*27,051 6 6	26,953 7 6	.....
e. Other minor produce ...	8 8 0	293 0 6	301 8 6	301 8 6	.....
III.—Confiscated, drift, and waif wood	.....	230 7 6	230 7 6	230 7 6	.....
Total	122 2 0	52,722 1 7	52,844 3 7	52,746 4 7	.....

* The sum of Rs. 97-15 0 has been written off.

West Khándesh.

East Khándesh.

FORM No. 60—continued.

Division.	Particulars.	Outstandings at commencement of year.	Value of Sales and other Revenue during year.	Total.	Amount realized during year.	Balance due to the Department at end of year.	Remarks.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Násik ...	<i>I.—Timber and other produce removed from the forests by Government agency—</i>						
	a. Timber	12,708 11 0	28,961 11 6	41,670 6 6	36,894 14 5	4,775 8 1	
	b. Firewood and charcoal	74 2 0	2,195 11 3	2,269 13 3	2,212 11 3	57 2 0	
	c. BámBUS ... ..	.....	.....	.....	.....	.....	
	d. Sañ wood ... ..	.....	.....	.....	.....	.....	
	e. Grass and other minor produce ... ..	.....	1,260 11 5	1,260 11 5	1,235 4 10	25 6 7	
	<i>II.—Timber and other produce removed from the forests by consumers and purchasers—</i>						
	a. Timber ... ..	.....	17,145 11 2	17,145 11 2	17,145 11 2	.....	
	b. Firewood and charcoal ... ..	.....	1,048 8 2	1,048 8 2	1,048 8 2	.....	
	c. BámBUS	120 1 7	3,955 1 5	4,075 3 0	4,075 3 0	.....	
Ahmednagar ...	d. Grazing and fodder grass	214 1 5	39,908 11 0	40,122 12 5	37,831 5 0	2,291 7 5	
	e. Other minor produce	1 9 0	3,647 3 7	3,648 12 7	3,648 12 7	.....	
	<i>III.—Confiscated, drift, and waif wood</i>	10 14 0	302 1 5	312 15 5	309 11 2	3 4 3	
	Total	13,129 7 0	98,425 6 11	1,11,554 13 11	1,04,402 1 7	7,152 12 4	
	<i>I.—Timber and other produce removed from the forests by Government agency—</i>						
	a. Timber	105 9 3	8,306 3 10	8,411 13 1	8,411 13 1	.....	
	b. Firewood and charcoal	24 4 9	1,416 7 9	1,440 12 6	1,440 12 6	.....	
	c. BámBUS ... ..	.....	.....	.....	.....	.....	
	d. Sandalwood ... ..	.....	0 11 0	0 11 0	0 11 0	.....	
	e. Grass and other minor produce ... ..	.....	3,747 0 6	3,747 0 6	3,747 0 6	.....	
Ahmednagar ...	<i>II.—Timber and other produce removed from the forests by consumers and purchasers—</i>						
	a. Timber ... ..	.....	77 7 10	77 7 10	77 7 10	.....	
	b. Firewood and charcoal ... ..	.....	410 2 0	410 2 0	410 2 0	.....	
	c. BámBUS ... ..	.....	438 5 0	438 5 0	438 5 0	.....	
	d. Grazing and fodder grass ... ..	.....	27,199 12 11	27,199 12 11	27,199 12 11	.....	
	e. Other minor produce ... ..	.....	1,004 1 9	1,004 1 9	1,004 1 9	.....	

III.—Confiscated, drift and waif wood...

Total ...

I.—Timber and other produce removed from the forests by Government agency—

- a. Timber ...
- b. Firewood and charcoal ...
- c. Bámbus ...
- d. Sandalwood ...
- e. Grass and other minor produce ...

II.—Timber and other produce removed from the forests by consumers and purchasers—

- a. Timber ...
- b. Firewood and charcoal ...
- c. Bámbus ...
- d. Grazing and fodder grass ...
- e. Other minor produce ...

III.—Confiscated, drift, and waif wood

Total ...

I.—Timber and other produce removed from the forests by Government agency—

- a. Timber ...
- b. Firewood and charcoal ...
- c. Bámbus ...
- d. Sandalwood ...
- e. Grass and other minor produce ...

II.—Timber and other produce removed from the forests by consumers and purchasers—

- a. Timber ...
- b. Firewood and charcoal ...
- c. Bámbus ...
- d. Grazing and fodder grass ...
- e. Other minor produce ...

III.—Confiscated, drift, and waif wood

Total ...

	.....	350 12 1	350 12 1	350 12 1	.....
Total ...	129 14 0	42,951 0 8	43,080 14 8	43,080 14 8	.....
I.—Timber and other produce removed from the forests by Government agency—					
a. Timber ...	.....	19,406 7 6	19,406 7 6	19,406 7 6	.....
b. Firewood and charcoal ...	.....	13,229 14 0	13,229 14 0	13,229 14 0	.....
c. Bámbus ...	.....	.....	.....	.....	.....
d. Sandalwood ...	.....	.....	.....	.....	.....
e. Grass and other minor produce ...	.....	3,560 12 3	3,560 12 3	3,560 12 3	.....
II.—Timber and other produce removed from the forests by consumers and purchasers—					
a. Timber ...	.....	124 1 6	124 1 6	124 1 6	.....
b. Firewood and charcoal ...	.....	665 11 6	665 11 6	665 11 6	.....
c. Bámbus ...	.....	369 9 0	369 9 0	369 9 0	.....
d. Grazing and fodder grass ...	658 13 9	47,557 7 9	*48,216 5 6	47,707 11 9	.....
e. Other minor produce ...	.....	1,102 4 9	1,102 4 9	1,102 4 9	.....
III.—Confiscated, drift, and waif wood	.....	430 11 6	430 11 6	430 11 6	.....
Total ...	658 13 9	86,446 15 9	87,105 13 6	86,597 3 9	.....
I.—Timber and other produce removed from the forests by Government agency—					
a. Timber ...	21 4 0	12,639 1 5	12,660 5 5	12,660 5 5	.....
b. Firewood and charcoal ...	.....	3,345 8 6	3,345 8 6	3,345 8 6	.....
c. Bámbus ...	.....	292 3 6	292 3 6	292 3 6	.....
d. Sandalwood ...	.....	3 9 6	3 9 6	3 9 6	.....
e. Grass and other minor produce ...	.....	10,309 4 2	10,309 4 2	10,309 4 2	.....
II.—Timber and other produce removed from the forests by consumers and purchasers—					
a. Timber ...	.....	891 12 7	891 12 7	891 12 7	.....
b. Firewood and charcoal ...	.....	205 13 3	205 13 3	205 13 3	.....
c. Bámbus ...	.....	298 11 3	298 11 3	298 11 3	.....
d. Grazing and fodder grass ...	†40 0 0	37,156 8 0	37,196 8 0	37,156 8 0	.....
e. Other minor produce ...	.....	2,811 7 6	2,811 7 6	2,811 7 6	.....
III.—Confiscated, drift, and waif wood	.....	88 6 11	88 6 11	88 6 11	.....
Total ...	61 4 0	68,042 6 7	68,103 10 7	68,063 10 7	.....

* The sum of Rs. 508-9-9 has been written off.

† Out of Rs. 40 the sum of Rs. 21-14-0 has been written off, and Rs. 18-2-0 have been transferred to the Revenue Department.

Poona ...

Sátára ...

Division.	Particulars.	Outstandings at commencement of year.	Value of Sales and other Revenue during year.	Total.	Amount realized during year.	Balance due to the Department at end of year.	Remarks.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Sholapur	<i>I.—Timber and other produce removed from the forests by Government agency—</i>						
	a. Timber ...	.....	160 14 0	160 14 0	160 14 0	 0	
	b. Firewood and charcoal ...	.....	748 2 6	748 2 6	733 2 6	15 0 0	
	c. Bámbus ...	.....	.....	.....	.....	.....	
	d. Sandalwood ...	.....	.....	.....	.....	.....	
	e. Grass and other minor produce ...	.....	17 6 3	17 6 3	17 6 3	.....	
	<i>II.—Timber and other produce removed from the forests by consumers and purchasers—</i>						
	a. Timber ...	.....	34 15 3	34 15 3	34 15 3	.....	
	b. Firewood and charcoal ...	.....	197 5 9	197 5 9	197 5 9	.....	
	c. Bámbus ...	.....	.....	.....	.....	.....	
	d. Grazing and fodder grass...	135 6 0	5,653 4 9	*5,788 10 9	5,732 2 9	.....	* The sum of Rs. 56-8-0 has been written off.
	e. Other minor produce ...	4 0 0	34 6 0	38 6 0	34 6 0	4 0 0	
	<i>III.—Confiscated, drift, and waif wood</i>	.....	7 12 9	7 12 9	7 12 9	.....	
	Total ...	139 6 0	6,854 3 3	6,993 9 3	6,918 1 3	19 0 0	
Surat	<i>I.—Timber and other produce removed from the forests by Government agency—</i>						
	a. Timber ...	.....	8,948 0 7	8,948 0 7	8,820 0 7	128 0 0	
	b. Firewood and charcoal ...	.....	6,414 15 0	6,414 15 0	6,414 15 0	.....	
	c. Bámbus ...	.....	.....	.....	.....	.....	
	d. Sandalwood ...	.....	.....	.....	.....	.....	
	e. Grass and other minor produce ...	.....	.....	.....	.....	.....	
	<i>II.—Timber and other produce removed from the forests by consumers and purchasers—</i>						
	a. Timber ...	17,193 12 0	15,382 1 3	32,575 13 3	29,701 5 4	2,874 7 11	
	b. Firewood and charcoal ...	.....	1,724 13 9	1,724 13 9	1,724 13 9	.....	
	c. Bámbus ...	.....	17,403 13 5	17,403 13 5	17,403 13 5	.....	
	d. Grazing and fodder grass...	.....	1,274 15 0	1,274 15 0	1,274 15 0	.....	
	e. Other minor produce ...	225 0 0	1,606 5 1	1,831 5 1	1,831 5 1	.....	
	<i>III.—Confiscated, drift, and waif wood</i>	1,004 6 5	425 4 0	1,429 10 5	819 13 2	609 13 3	
	Total ...	18,423 2 5	53,180 4 1	71,603 6 6	67,991 1 4	3,612 5 2	

I.—Timber and other produce removed from the forests by Government agency—

a. Timber ...
b. Firewood and charcoal ...
c. Bámbus ...
d. Sandalwood ...
e. Grass and other minor produce ...

II.—Timber and other produce removed from the forests by consumers and purchasers—

a. Timber ...
b. Firewood and charcoal ...
c. Bámbus ...
d. Grazing and fodder grass...
e. Other minor produce ...

III.—Confiscated, drift and waif wood

Total ...

I.—Timber and other produce removed from the forests by Government agency—

a. Timber ...
b. Firewood and charcoal ...
c. Bámbus ...
d. Sandalwood ...
e. Grass and other minor produce ...

II.—Timber and other produce removed from the forests by consumers and purchasers—

a. Timber ...
b. Firewood and charcoal ...
c. Bámbus ...
d. Grazing and fodder grass...
e. Other minor produce ...

III.—Confiscated, drift and waif wood

Grand Total ...

FORM No. 61.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Outstandings and Liabilities on account of Contractors and Disbursers for 1886-87.

Divisions.	DEPARTMENT DEBTOR.			DEPARTMENT CREDITOR.			BALANCE DUE		Remarks.
	At commencement of year.	Recoveries in cash and value of supplies and work done during year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).	
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Contractors.									
Panch Mahals...	...	1 8 0	1 8 0	1 8 0	.....	1 8 0	.....	...	
Násik ...	...	60 0 0	60 0 0	.....	60 0 0	60 0 0	.....	...	
North Thána ...	...	559 13 6	559 13 6	.....	559 13 6	559 13 6	.....	...	
Total Contractors ...	...	621 5 6	621 5 6	1 8 0	619 13 6	621 5 6	.....	...	
Disbursers.									
Ahmednagar ...	...	42,195 1 4	42,195 1 4	.....	42,195 1 4	42,195 1 4	.....	...	
Khándesh, East ...	...	31,534 13 2	31,534 13 2	873 2 7	30,821 2 1	31,694 4 8	159 7 6	...	
Khándesh, West ...	...	30,146 10 1	30,146 10 1	389 10 7	30,061 3 11	30,450 14 6	304 4 5	...	
Násik ...	...	45,446 15 9	45,446 15 9	110 8 0	45,342 10 1	45,453 2 1	6 2 4	...	
Panch Mahals...	...	17,775 1 11	17,775 1 11	.....	17,775 1 11	17,775 1 11	.....	...	
Poona ...	...	50,625 5 0	50,625 5 0	.....	50,625 5 0	50,625 5 0	.....	...	
Sátára ...	...	45,886 9 2	45,886 9 2	97 10 1	46,159 13 1	46,257 7 2	370 14 0	...	
Sholapur ...	...	15,528 8 7	15,528 8 7	118 11 10	15,744 0 11	15,862 12 9	334 4 2	...	
Surat ...	...	21,351 0 7	21,351 0 7	15 11 6	21,335 5 1	21,351 0 7	.....	...	
Thána, North ...	...	56,248 8 10	56,248 8 10	65 1 3	56,540 15 11	56,606 1 2	357 8 4	...	
Thána, South ...	...	57,281 3 6	57,281 3 6	43 13 11	57,227 5 4	57,271 3 3	.....	10 0 3	
Working Plans ...	...	1,211 8 9	1,211 8 9	.....	1,211 8 9	1,211 8 9	.....	...	
Total Disbursers ...	...	4,15,231 6 8	4,15,231 6 8	1,714 5 9	4,15,039 9 5	4,16,753 15 2	1,532 8 9	10 0 3	
Grand Total ...	...	4,15,852 12 2	4,15,852 12 2	1,715 13 9	4,15,659 6 11	4,17,375 4 8	1,532 8 9	10 0 3	

No. ^F of 1887-88.

Forwarded to the Conservator of Forests, Northern Circle, under Section 238 of the Forest Code.

Bombay, Accountant General's Office, {
10th August 1887.GODREZJI D. PUDUMJI,
for Accountant General.

FORM No. 62.

FOREST DEPARTMENT, BOMBAY, NORTHERN CIRCLE.

Financial Results of the year 1886-87.

Division.	TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERN- MENT AGENCY.		OTHER REVENUE.		FORMATION, PROTECTION, AND IMPROVE- MENT OF FORESTS.	TOTAL.		Remarks.
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
North Thána ...	86,108	18,661	1,33,080	4,712	55,429	2,19,188	78,802	
South Thána ...	69,815	18,484	34,026	1,348	61,777	1,03,841	81,609	
West Khándesh ...	10,718	2,767	80,185	45,765	433	90,903	48,965	
East Khándesh ...	12,353	3,574	49,536	2,261	41,105	61,889	46,940	
Násik ...	40,434	7,688	66,153	711	58,949	1,06,587	67,348	
Ahmednagar ...	13,602	2,812	30,515	3,991	51,056	44,117	57,859	
Poona ...	36,197	5,956	53,731	814	75,358	89,928	82,128	
Sátára ...	26,611	8,683	42,490	23,568	37,108	69,101	69,359	
Sholápur ...	915	2,116	6,478	6,746	23,460	7,393	32,322	
Surat ...	15,235	10,111	54,469	20,769	12,375	69,704	43,255	
Panch Maháls ...	13,162	726	37,263	1,401	28,440	50,425	30,567	
Working Plans ...	...	...	...	...	15,876	...	15,876	
Direction ...	...	...	25	...	32,835	25	32,835	
Total ...	3,25,150	81,578	5,87,951	1,12,086	4,94,201	9,13,101	6,87,865	

A. T. SHUTTLEWORTH,

Conservator of Forests, N. C.

Poona, 25th October 1887.

No. 3813 of 1887.

REVENUE DEPARTMENT

Camp Ahmedabad, 13th December 1887.

Forwarded to Government,

2. Considerable progress has been made in the acquisition of lands to complete the demarcation schemes. But of the area so acquired only a very insignificant portion appears to belong to this division. This matter should be pressed on with in Thána.

3. I entirely agree with the Conservator that the crests of the Gháts are not sufficiently protected. Above Lonávli (to the north) the tops of the hills are becoming quite bare, and this is also the case in some of the Bhor State villages to the *south*. Money could hardly be spent more profitably or judiciously than in acquiring land and rights in such positions.

4. I do not myself think that the topographical maps of Thána will repay their enormous cost. They are of course exceedingly useful in all initial proceedings towards settlement; but when boundaries have once been fixed, there will be much less use for these expensive maps.

5. I entirely concur in Mr. Shuttleworth's argument in favour of adopting small areas or compartments upon which to commence systematic "working," and I think that the "rough and ready" system proposed is more likely to be workable *at first* than the more elaborate one first contemplated. If very large compartments were adopted, much inconvenience and hardship to the people would be the result.

6. There is improvement this year in the statistics of forest crime. The figures in paragraph 70 show that more care and discretion were used in bringing such offences before the Courts.

7. The treatment of simple offences under Section 43 of the Land Revenue Code is becoming more successful, as I anticipated. In the 154 cases referred to, the value of the timber was less than rupee one per case, and this method of dealing with such petty matters is clearly better than criminal prosecution.

8. There has been conspicuous moderation in impounding cattle.

9. I have already expressed my opinion very strongly that without an alteration in the Forest Act regarding *passes*, there will never be efficient protection in Thána.

10. There has been a very notable improvement in *fire conservancy*, though the name is hardly a suitable one, considering that few active measures are taken in this direction, and that expenditure is nominal. I have always held that a good deal depends upon the temper of the people. I should have been glad to see so conspicuous an improvement signalized by a notable increase in the rewards given to the villagers. I do not, however, quite trust the correctness of the figures.

11. The grazing question is under the separate consideration of Government.

12. With regard to the complaint about thorns, I can only observe that the demand will *increase* as wild animals increase in the reserves. The Conservator's remarks are somewhat overdrawn, but there is some reason in them. There are thorns and thorns. The removal of those most valued (the "bor" or "wait a bit") should be freely allowed, and in some places bambu trimmings might be utilised. But if Revenue Officers find the privilege *abused*, it should be stopped at once.

13. I will ask the Collector of Thána to report on the working of the present system of retail sales for the Bassein sugar-boilers.

14. The income of the Department has somewhat fallen off, but this is sufficiently explained by the lower prices obtainable. There has been a notable decrease of ill-feeling against the Department in Thána, and on this and the general results of the year I congratulate the Conservator.

15. I would ask that, if it is necessary to print "rules" in *extenso*, they should be embodied in an appendix. They are wearisome, and somewhat unprofitable reading in the body of a report.

G. F. SHEPPARD,
Commissioner, N. D.

No. $\frac{R}{109}$ OF 1888.

FROM

ARTHUR CRAWFORD, Esquire, C. S., C. M. G.,
Commissioner, C. D.;

TO

THE CHIEF SECRETARY TO GOVERNMENT,
REVENUE DEPARTMENT,
Bombay.

Poona, 10th January 1888.

SIR,

I have the honour to submit the accompanying Administration Report of the Conservator of Forests, N. C., for the year 1886-87, received on the 12th December 1887.

2. *Paragraphs 1 to 11.*—The increase in the forest area during the past year was 281 square miles and 576 acres. The revenue has, however, declined from Rs. 10,37,296 in 1885-86 to Rs. 9,13,100 during the year under report. A large number of cases under the Forest Act were compounded, and this, I hope, is evidence that the officers of the Department have acted on the principle of moderation in the exercise of their functions.

3. *Paragraphs 12 to 69.*—At the close of the year the forest demarcation remained to be completed in 19 talukás of the Central Division. The proposals regarding 9 talukás have lately been formally sanctioned by Government, and it is hoped during the current season all will be disposed of. The work of erecting forest boundaries is being pushed on with vigour. When this is completed, encroachments on forest areas ought to cease. The settlement of claims to forest areas, however, seems to be behindhand, and both for the protection of forests and the public at large it is very necessary that this work should be undertaken and completed as early as possible. The code of rules regarding the privileges in the North and South Tápti talukás were sanctioned finally by Government during the year under report.

4. *Paragraphs 70 to 88.*—Though a large number of forest offences were compounded, nevertheless the cases brought before Criminal Courts show an increase of 64 over last year, the highest figures being 150 in Ahmednagar and 146 in Násik. In Poona, during 1885-86, 230 cases were tried, but the number fell to 99 during the year under report. The Conservator's remarks on the working of Section 67 of the Forest Act appear to me to be sensible. Mr. Wroughton, the Divisional Forest Officer, Poona, says that the compounding of forest offences is a great temptation to dishonesty by subordinates. This may be so, but the remedy is obvious, *viz.*, that superior officers should scrutinize as many such cases as possible.

5. *Paragraphs 89 to 136.*—The revenue from grass and grazing is, on paper, increasing enormously; in the year 1878-79 the income from this source was Rs. 42,629, and in the year under report the revenue rose to Rs. 2,37,126! This

simply means that a large sum has been abstracted from Land Revenue and credited to Forest. I see no reason to believe that increase is due to departmental causes. The greatest increase is in the Násik and Ahmednagar Collect-orates. Mr. Shuttleworth seems to consider the supply of thorns to private persons for fencing cultivated areas a difficulty in the way of forest conservancy. The final orders of Government on the subject are contained in the Government

* No. 6493, dated 27th September 1887, R. D.

Resolution* noted in the margin, and the instructions when carefully carried out need cause no danger to forests. The departmental cutting of teak and other forest was everywhere a complete success. This system is also beneficial, inas-much as it conciliates people resident near forest reserves.

6. *Paragraphs 137 to 140.*—Free grants of timber amounted during the year to Rs. 4,244, or about Rs. 300 over last year. Mr. Shuttleworth adds to this the estimated value of other concessions allowed to the people, but I think that free grazing and other concessions are not directly connected with the forest conservancy. Many of the concessions are recognitions of old rights and privileges enjoyed by the people long before the Forest Department was created.

7. *Paragraphs 141 to 150.*—The Conservator of Forests accounts for the decrease of revenue by a small demand for timber in the Thána District and the Dángs and the Mándvi forests combined, with a sudden and unaccountable fall in the prices of myrabolans. The expenditure shows an increase of Rs. 19,191!

8. The Conservator seems to have moved actively throughout his charge. Mr. Shuttleworth's remarks in paragraph 157 regarding the reduction of the bulk of the Divisional Forest Officer's establishment when on tour is worthy of consideration. The suggestion, if carried out, will simplify work and considerably reduce expenditure on the touring of Divisional Forest Officers.

I have the honour to be,

Sir,

Your most obedient Servant,

ARTHUR CRAWFORD,

Commissioner, C. D.

Statement showing the information with regard to the Areas in the Northern Circle declared, under the provisions of Section 34, either Protected Forests, but in which the rights have not been finally settled for the year 1886-87, as required by paragraph 2 of Government Resolution No. 8738 dated 24th December 1887.

Class of Forests.	At the commencement of the year— Areas under Section 34 in which private rights have not been enquired into, settled and recorded.	AREAS SETTLED DURING THE YEAR UNDER		Area of Reserved Forests alienated under Section 26.	Area of Protected Forests disforested under Government orders.	At the end of the year—Areas under Section 34 in which private rights have not been enquired into, settled and recorded.	Remarks.
		Chapter II of the Act.	Chapter IV of the Act.				
	Square Miles.	Square Miles.	Square Miles.	Square Miles.	Square Miles.	Square Miles.	
<i>North Thána.</i>							
Reserved Forests	201	.....	.....	.....	.....	201	The settlement work accomplished during the year is not exhibited by these figures, but only the progress made in the settlement of the Forest lands which were gazetted under Section 34 of the Forest Act in March 1879.
Protected Forests	292	.....	.....	.....	1	291	
<i>South Thána.</i>							
Reserved Forests	99	.....	.....	.....	.....	99	
Protected Forests	329	.....	.....	.....	.....	329	
<i>Poona.</i>							
Reserved Forests	329	68	.....	3	.....	258	
Protected Forests	.....	.....	.....	.....	.....	.....	
<i>Surat.</i>							
Reserved Forests	955	.....	.....	.....	.....	955	
Protected Forests	.....	.....	.....	.....	.....	.....	
<i>Panch Mahals.</i>							
Reserved Forests	183	.....	.....	5	.....	178	
Protected Forests	.....	.....	.....	.....	.....	.....	
<i>Ahmednagar.</i>							
Reserved Forests	1	.....	.....	.....	.....	1	
Protected Forests	.....	.....	.....	.....	.....	.....	
Total	2,389	68	.....	8	1	2,316	

A. T. SHUTTLEWORTH,
Conservator of Forests, N. C.

Poona, 1st March 1888.

SOUTHERN CIRCLE.

No. 3135 of 1887-88.

FROM

J. L. L. MACGREGOR, ESQUIRE,
CONSERVATOR OF FORESTS, SOUTHERN CIRCLE;

TO

THE SECRETARY TO GOVERNMENT,
REVENUE DEPARTMENT,
Bombay.

*Conservator's Office, S.C.,
Belgaum, 18th October 1887.*

SIR,

I have the honour to submit herewith the Forest Administration Report of the Southern Circle for 1886-87, together with its subsidiary statements, as per list appended.

I have the honour to be,

Sir,

Your most obedient Servant,

J. L. L. MACGREGOR,
Conservator of Forests, S.C.

Through the Commissioner, S. D.

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SOUTHERN CIRCLE.

1886-87.

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FOREST ADMINISTRATION REPORT

OF THE

SOUTHERN CIRCLE, BOMBAY PRESIDENCY,

FOR THE OFFICIAL YEAR 1886-87.

INTRODUCTION.

In point of revenue the year 1886-87 may be regarded as a favourable one. The receipts have considerably exceeded those of all past-years, excepting 1885-86, whose income was higher owing to the large number of sleepers supplied to the Southern Marátha Railway Company. The demand for wood has increased, and it may be expected to further increase with the opening of the Western Deccan line of the Southern Marátha Railway, when there will be direct railway communication with Poona.

2. The increase in the sale of fuel supplied to the railway, now amounting to 2,000 tons a month, with every chance of its increasing to 3,000 during the present year, and the opening of the railway through the forests of Southern Belgaum, which will considerably increase the demand for forest produce, are the most noteworthy events of the past year.

3. The survey of the forests of the Khánápur Táluka was continued mainly under Messrs. Longe and Pollen, and all the forests of Belgaum, of which it is necessary to have accurate maps, have now been surveyed. This will set the survey-party free to commence work on the heavy timber-forests of Haliyál in Kánara, which are a continuation of the forests of Southern Khánápur.

CHAPTER I.

AREA AND RESERVES.

4. The area under forest conservancy on the 1st April 1886, and gazetted under the Forest Act of 1878, was 5,230 square miles 481 acres, consisting of 1,816 square miles 169 acres of Reserved, and 3,414 square miles 312 acres of Protected, Forest.

5. The additions and disforestments made during the year 1886-87 are as follows :—

				RESERVED FORESTS.		PROTECTED FORESTS.	
				Square Miles.	Acres.	Square Miles.	Acres.
Added...	...	...	...	6	104 $\frac{1}{40}$	4	492 $\frac{21}{40}$
Excluded	...	...	...	...	$\frac{3}{4}$	6	624 $\frac{21}{40}$

leaving on the 31st March, 1887, 5,234 square miles and 452 $\frac{11}{40}$ acres, made up of :—

			Square Miles.	Acres.
Reserved Forests	...	...	...1,822	272 $\frac{11}{40}$
Protected Forests	...	...	...3,412	180
			—	—
Total	...	...	...5,234	452 $\frac{11}{40}$
			—	—

6. The following shows the details for the Collectorates of the Circle :—

Name of Collectorate.	AREA ON 1ST APRIL 1886.				ADDED DURING THE YEAR.				EXCLUDED OR TRANSFERRED TO OTHER HEADS.				AREA ON THE 31st MARCH 1887.				TOTAL FOREST AREA.	
	Reserved.		Protected.		Reserved.		Protected.		Reserved.		Protected.		Reserved.		Protected.		Area.	
	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.
Kánara ..	683	446	2,864	631	..	..	..	..	..	..	..	..	683	446	2,864	631	3,548	437
Belgaum ..	492	82	197	207	..	..	..	16 $\frac{3}{4}$	..	..	..	..	492	82	197	223 $\frac{3}{4}$	689	305 $\frac{3}{4}$
Dhárwār ..	171	425	260	261	..	..	..	..	..	..	..	..	171	425	260	261	432	46
Kolába ..	293	568	91	129	6	104 $\frac{1}{10}$	4	476 $\frac{1}{4}$	..	4	6	624 $\frac{1}{10}$	299	471 $\frac{1}{10}$	88	620 $\frac{1}{10}$	388	452 $\frac{1}{10}$
Bijápúr ..	155	115	..	364	..	..	..	..	..	..	..	..	155	115	..	364	155	479
Ratnágiri ..	20	13	..	..	..	..	..	..	..	..	..	..	20	13	..	..	20	13
Total ..	1,816	169	3,414	312	6	104 $\frac{1}{10}$	4	492 $\frac{1}{10}$	..	4	6	624 $\frac{1}{10}$	1,822	272 $\frac{1}{10}$	3,412	180	5,234	452 $\frac{1}{10}$

KANARA.

7. Schedules of lands, comprising 20 villages of the Honávar Sub-division and 43 villages of Sirsi, aggregating 17,850 and 42,409 acres, respectively, were published under Section 4 of the Forest Act. In the Ankolá Sub-division 2 acres and 6 gunthás were also notified under Section 4 of the Act.

8. These areas are now being settled by Mr. Wingate, who has demarcated the Reserved and Protected Forests in the Mundgod Sub-division by means of cleared lines and boards, the line dividing the Protected and Reserved Forests being upwards of 72 miles long. Demarcation lines, aggregating 7 miles and a half, were also cut in three adjoining forests of the Sirsi Sub-division settled in 1880-81.

BELGAUM.

9. Mr. Woodward submitted a report on the settlement of 22 villages in the Khánápúr Sub-division, but Government directed that a scheme for the whole forest area of the Sub-division should be submitted, and his proposals were not sanctioned.

10. The addition of 16 acres shown under Protected Forests in the above statement is due to certain corrections made in the original notification of the Parasgad forests. In the Belgaum Sub-division 33 acres and 9 gunthás were also notified under Section 4 of the Forest Act.

KOLÁBA.

11. The work of settlement and demarcation has been vigorously prosecuted during the year. Government-orders were passed on the settlement and demarcation of the Mahád and Mángaon sub-divisions, and the lands in Uran were finally notified. The results of these operations are as follows :—

(1) In the Mahád Sub-division 29,994 $\frac{17}{20}$ acres (*i. e.* 25,330 acres Reserved and 4,664 $\frac{17}{20}$ acres Protected Forest) were taken up.

(2) In the Mángaon Sub-division 29,580 $\frac{23}{40}$ acres, made up of 18,190 $\frac{31}{40}$ acres of Reserved and 11,389 $\frac{4}{5}$ of Protected Forest, were finally notified.

(3) In the Uran Mahál, 586 $\frac{1}{2}$ acres were reserved.

12. Mr. Sinclair also completed the settlement-operations in Pen and Nágothna, and got well forward in Roha.

13. The following is the other work done during the year :—

Allotment of dháli-lands in 22 villages of the Mángaon Sub-division.

Allotment of dháli-lands in 22 villages of the Pen Sub-division and in one of Mahád.

14. Forest registers of 81 villages of Mahád, 124 of Mángaon, 46 of Pen, 44 of Nágothna, and 118 of Roha were prepared.

15. The following boundary-marks were erected or renewed :—

2,975 new forest cairns.
 915 old forest cairns renewed.
 401 do. do. do. repaired.
 535 dháli-cairns.
 81 ordinary stones.

16. In the Panvel, Mángaon, Mahád, and Pén sub-divisions, 30 gunthás of Reserved, and 4,464 $\frac{21}{40}$ acres of Protected Forests were disforested.

BIJAPUR.

17. The settlement of the forests of Bádámi, Hungund, and Bágalkot sub-divisions was revised by Mr. Tucker, but no Government orders were passed on his reports.

18. In the Bádámi Sub-division, 881 acres and 12 gunthás were notified under Section 4 of the Forest Act.

RATNAGIRI.

19. Mr. Logan undertook the settlement in the sub-divisions of Chiplún, Khed, Sangameshvar, and Rájápur, and submitted reports, which are now pending the decision of Government.

20. During the year, 13,984 acres and 7 gunthás in the Devgad and Sangameshvar sub-divisions were notified under Section 4 of the Forest Act.

21. The expenditure incurred in connection with the demarcation and settlement of forest during the year amounted to Rs. 54,255-10-9, as follows :—

(1) Salaries and allowances of Forest-Settlement-Officers, not charged against the Forest Department ...	Rs. 38,026	7	9
(2) Salaries and allowances of the establishments employed under the Forest-Settlement-Officers and contingent expenditure incurred ...	Rs. 14,872	5	8
(3) Boundary-marks, &c. ...	Rs. 1,326	13	4
Total Rs.	54,225	10	9

CHAPTER II.

SURVEYS AND ORGANIZATION.

1.—SURVEYS.

22. The survey of the forests of Southern Khánápur was continued, under Messrs. Longe and Pollen, on the 8-inch scale.

23. It was commenced in 1885. During 1885-86 very little progress was made, but during the past year better results were obtained. The accompanying map shows the forest areas surveyed each year. For 1885-86 the area amounts to 11 square miles, and for 1886-87 to 154. The expense for 1886-87 was approximately Rs. 18,528, which amounts to a cost of Rs. 113 per square mile. The frequent changing of officers in charge of the survey may have retarded work (there were six changes during two years); but, considering that scarcely any topographical details are asked for, the result is disappointing, and I think that a departmental survey, or one by the Survey Branch of the Forest Department under the Government of India, would be less expensive and more expeditious. In any case, it appears to me expedient to place the forest survey party under the Conservator of Forests. A good deal of extra forest land has, I believe, been taken up by the forest party, whose expenses are charged to the Department. If that be the case, the above estimate of the cost of the forest survey is of course higher than it should be.

2.—WORKING PLANS.

24. No plans based on sustained yield could be made, owing partly to the want of good maps of the Khánápúr-forests and partly to the weakness of the organization-staff, which consists of only one gazetted officer and a clerk. I hope to obtain sanction for the employment of another Assistant-Conservator with suitable establishment during the approaching season; both could be made available without causing additional expense.

25. During 1886-87, Mr. Andrewes, the officer specially employed for organization, investigated the yield and increment of the forests in the Khánápúr Táluka of Belgaum, with a view to ascertaining the sustained yield of the forests adjacent to the railway; and a plan for working those which supply fuel to the railway will, it is hoped, be completed during the current year.

26. The survey of all important areas in Khánápúr was completed last year, and the forests next to be taken in hand are the valuable timber-forests of Haliyál in Kánara.

CHAPTER III.

PROTECTION AND IMPROVEMENT.

1.—BREACHES OF THE LAW.

27. The magisterial cases during the year were as follows :—

Collectorates,			1885-86.			1886-87.			PERCENTAGE OF FAILURE.	
			Cases in which conviction was obtained.	Cases in which conviction failed.	Total Number of Cases.	Cases in which conviction was obtained.	Cases in which conviction failed.	Total Number of Cases.	1885-86.	1886-87.
Kánara	...	...	7	4	11	12	5	17	36	29
Belgaum	...	...	1	2	3	8	4	12	66	33
Dhárwár	...	...	6	3	9	5	6	11	33	54
Kolába	...	...	26	18	44	61	17	78	40	21
Bijápur	...	...	29	5	34	10	3	13	14	23
Ratnágiri	...	...	16	4	20	19	2	21	20	9
Total	...	...	85	36	121	115	37	152	29	24

28. The total number of cases in 1886-87 was 152, against 121 in the previous year—an increase of 31. The percentage of failures was 29 and 24 respectively.

29. The increase in the number of prosecutions occurs chiefly in the Kolábá-Division, where there were 78 in 1886-87 and 44 in the previous year. The increase is owing to prosecutions for illicit cultivation on dháli-lands. The percentage of failures was 21 in 1886-87 and 40 in 1885-86.

30. The cases in Belgaum also show an increase of 9. There, a kulkarni of Parasgad was convicted of levying grazing-fees without entering them in the accounts, and was punished with one and a half year's imprisonment.

31. The following statement gives the cases compounded by forest officers:—

Collectorates.	1885-86.			1886-87.				
	Number of Cases commuted.	Amount of Fines recovered.			Number of Cases commuted.	Amount of Fines recovered.		
		Rs.	a.	p.		Rs.	a.	p.
Kánara	44	74	10	8	46	344	9	4
Belgaum	20	60	7	0	35	199	12	6
Dhárwár	18	23	0	7	47	123	3	1
Bijápur	121	246	10	1	138	303	0	0
Kolába	180	1,051	10	1	130	1,299	4	1
Ratnágiri	55	44	12	5	42	63	8	9
Total ...	438	1,501	2	10	438	2,336	5	9

32. A statement showing the number of cases compromised under the Forest Act, as well as taken into Court, is given below, as directed in Government Resolution No. 3527 of the 2nd May 1884:—

Districts.	TAKEN INTO COURT.		COMPROMISED UNDER SECTION 67.		TOTAL NUMBER OF CASES.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
Kánara	11	17	44	46	55	63
Belgaum	3	12	20	35	23	47
Dhárwár	9	11	18	47	27	58
Kolába	44	78	180	130	224	208
Bijápur	34	13	121	138	155	151
Ratnágiri	20	21	55	42	75	63
Total ...	121	152	438	438	559	590

2.—FIRES.

33. The prevalence of forest-fires this year was much the same as usual. The following table shows the areas *which appear from the reports* to have been burnt, and the percentage of protection afforded:—

Collectorates.	FOREST AREA.		PROTECTED.		BURNT.		Percentage of Protection.
	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	
Kánara	3,548	437	2,870	367	678	70	81
Belgaum	689	305	650	535	38	410	94
Dhárwár	432	46	264	202	167	484	66
Kolába	388	452	385	293	3	159	99
Bijápur	155	479	150	461	5	18	98
Ratnágiri	20	13	9	43	...	99	46
Total ...	5,234	452	4,330	624	892	600	83.0

34. In Kánara, where the forests are continuous and unbroken by rides, it is extremely difficult to keep out fires, or to detect incendiaries. In the Northern half of that district the clearing of lines will be commenced in November; and it is hoped that, with their assistance, special areas may, in a year or two, be continuously protected from fire. At present, fires do incalculable mischief by almost putting a complete stop to the natural reproduction by seed of superior species, besides burning and injuring timber, both standing and felled.

3.—NATURAL REGENERATION.

35. For the above reason natural regeneration by seed is very bad, but coppice shoots are generally able to survive the fires.

4.—ARTIFICIAL REGENERATION.

KA'NARA.

36. Nothing was done in the way of planting in regular plantations of the Northern Division of Kánara. Out of the 14,000 casuarina seedlings raised in the previous year for planting on the coast of Kárwár, 12,000 are in a healthy condition, but 2,000 were destroyed by insects. In the Kásarkôd casuarina plantation of the Southern Division of Kánara 2,485 seedlings were planted out from nurseries. Of these 2,210 were killed by insects, besides 1,914 of those put out in the previous year. A nursery of 82,817 seedlings was prepared for transplanting during 1887-88.

37. The experiment in connection with the combining of kumri and the planting of useful plants was not successful.

38. In the Yellápur Sub-division of the Central Division of Kánara out of the 123 acres allotted for kumri cultivation 25 acres and 36 gunthás were planted with 9,000 divi-divi and 60 hirda plants. Of these only 43 divi-divi and 3 hirda plants are reported to have survived. In the Northern Division of Kánara no fresh planting was done, but of the 10,204 divi-divi and 56,149 hirda seedlings reported to be alive at the end of the previous year, 7,293 of the former and 271 of the latter have died.

BELGAUM.

39. No fresh planting was done here. It is reported that the plants on the kumri lands are disappearing:

DHA'RWA'R.

40. Of the 2,000 divi-divi and 140 Manilla tamarind, which germinated at the Dévikok plantation, 1,000 of the former and 60 of the latter were planted out.

BIJA'PUR.

41. A new plantation of bábúl was made at Jaknúr on the Malaprabha. About 9 acres were ploughed up, and seeds sown broadcast. At the close of the year, seedlings of an average height of one foot covered the area. At Mamdápur about 20 acres were treated in the same manner, but the result was not satisfactory.

42. In the Anantápur plantation 4,340 nim, 100 bámbus, 30 sandal, 4 jámbul, and 30 mashwál seedlings were put out from nurseries, and a nursery of 5,000 nim and 162 mashwál seedlings was formed. In the Mamdápur plantation 2,000 bámbus, 2,000 nim, 100 sandal, and 100 sirsál seedlings were planted, and a nursery of various kinds of seedlings was made.

KOLA BA.

43. No planting was done on an extensive scale. Some casuarina seedlings were put out at the Sattad-Nágáon plantation, and these have done fairly well. A nursery of 2,879 seedlings was also formed.

RATNA GIRI.

44. In the forest-reserves of Dápoli and Málvan 3,637 casuarina and 100 teak-plants were planted out from nurseries, and a nursery of 20,507 casuarina and other kinds of seedling was prepared. About 10½ khandis of seed were sown broad-cast in the several sub-divisions.

5.—EXPERIMENTS WITH EXOTIC TREES.

45. In the Yellápur Sub-division an experiment with mahogany-seeds was tried, but failed. The failure must have been owing to the badness of the seed, as trees from previous experiments are now to be seen from 6 to 9 feet high.

46. The *Pithecolobium Saman* trees, planted some years ago, are thriving well almost everywhere. They seeded in Yellápur for the first time; the pods were collected and given to cattle, which readily ate them. It is reported that if the pods were produced in sufficient quantity, they would form a valuable substitute for gram for cattle.

47. Experiments were made with divi-divi at the Maindápur and Anantápur plantations of the Bijápur Division. The plants surviving number only 1,800, a great number having been killed by insects.

6.—THINNINGS.

48. Thinnings were made in the Kárwár casuarina-plantation. 7,884 trees were selected and cut, and fetched Rs. 1,881-10-7.

49. In the Singatgéri plantation in Kánara, a thinning was made, and the 854 trees that were removed realized Rs. 328.

7.—COMMUNICATIONS AND BUILDINGS.

50. A sum of Rs. 6,552-6-2 was expended under this head.

(a) ROADS AND BRIDGES.

Rs. 1,394-8-0.

51. In the three divisions of Kánara the following forest-roads were put into repair through the agency of the Revenue-Department:—

- (1) Road between Bhágwati and Potōli.
- (2) Road between Hittalkárgade and Mágôd.
- (3) Road between Kátur and Umachgi.

52. In the Yellápur Sub-division the road from Udamaki to the Saw-Mills was repaired by the Forest Department, as well as the *band*-road in the Dápoli Sub-division of Ratnágiri.

53. The construction of a road between Hemádge and Londe—10 miles long—in the Belgaum Division was commenced by the Forest Department. This will afford a line for the transport of forest-produce to the railway.

(b) BUILDINGS

AND

(c) OTHER WORKS.

Rs 5,157-14-2.

54. Two forest watch-houses in the Northern Division of Kánara and 3 in the Central Division were built at a cost of Rs. 300 each, and, in the Southern Division of Kánara, a rest-house and 2 guard-houses built for Rs. 900. A depôt-house was commenced on the bandar at Honávar, but, owing to objections raised by the Customs' authorities, the work was interrupted.

55. In the Belgaum-Division, a forest rest-house was completed and 2 guard-houses. Three watch-houses were also built in Dhírwár.

56. Repairs to various cart-tracks in forests and to buildings were made as usual.

CHAPTER IV.

YIELD AND WORKING.

57. The following table exhibits the yield of forests of the several Divisions of the Southern Circle for the two years 1885-86 and 1886-87 :—

Divisions.	Description.	1885-86.		1886-87.	
		Number of Logs.	Khandis.	Number of Logs.	Khandis.
Northern Division of Kánara	<i>(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency).</i>				
	Teak	4,224	7,602	7,896	15,345
	Do. round pieces for sleepers	49,964	...	5,552	...
	Do. poles	19,317	...	2,961	...
	Blackwood	470	627	131	180
	Do. poles	...	...	28	...
	Junglewood	365	657	1,155	2,196
	Firewood Tons.	448	...	526	...
	Charcoal	...	12	...	14
	Myrobolans	...	2,429	...	2,386
	<i>(2).—Removal of Produce by Purchasers for local consumption on payment of fees.</i>				
	Junglewood	...	2,940	...	4,656
	Do. poles	10,304	...	9,385	...
	BámBUS	2,57,217	...	4,20,591	...
	Firewood Cubic feet.	4,293	...	11,67,160	...
	Do. Cart-loads.	...	...	1,368	...
	Do. Head-loads.	30,956	...	35,716	...
	Charcoal Maunds.	631	...	440	...
	Myrobolans	...	29	...	...
	Baini trees	...	...	11	...
	Kárvi Head-loads.	48	...	513	...
	Rattan Do.	2	...	52	...
	Creper for baskets	...	...	1,643	...
	<i>(3).—Removal of Produce for export on payment of fees.</i>				
	Junglewood	...	4,000	...	4,195
	BámBUS	19,39,725	...	20,66,625	...
	Firewood Tons.	20,853	...	8,834	...
	Kárvi Head-loads.	...	...	1,000	...
	<i>(4).—Free Grants of Forest Produce.</i>				
	Junglewood	...	2,516	...	2,450
	BámBUS	19,620	...	33,346	...
	Firewood Cart-loads.	31	...	...	...
	Do. Head-loads.	...	...	100	...
Central Division of Kánara.	<i>(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency).</i>				
	Teak	1,371	2,196	3,440	6,551
	Do. round pieces for sleepers	1,07,402	...	23,071	...
	Do. poles	8,147	...	11,223	...
	Sandalwood	...	13	...	13
	Ebonywood	5	1	...	...
	Blackwood	35	38	2	3
	Junglewood	467	678	110	191
	Do. poles	114	...	59	5
	Jirátwood pieces	...	...	643	...
	BámBUS	...	...	85	...

Divisions.	Description.	1885-86.		1886-87.	
		Number of Logs.	Khandis.	Number of Logs.	Khandis.
Central Division of Kánara—continued.	(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency)—continued.				
	Myrobolans	...	334	...	327
	Shigékái	...	5	...	4
	Brakes for traffic carts No.	1,653	...	...	...
	Grass bundles	9,32,783	...	77,600	...
	Agricultural implements	125	...	...	...
	Firewood Cart-loads	401	...	14	...
	Do. Stacks.	549	...	1,785	...
	(2).—Removal of Produce by Purchasers for local consumption on the payment of fees.				
	Teak	115	115	...	101
	Blackwood	...	4	...	220
	Junglewood	...	1,903	...	2,637
	Do. poles or pieces	434	...	1,015	...
	Do. plants	...	...	9	...
	Bámbus	1,66,863	...	1,59,764	...
	Firewood Cart-loads.	1,174	...	1,156	...
	Do. Head-loads.	72,447	...	81,230	...
	Charcoal Maunds.	929	...	806	...
	Baini trees	6	...	41	...
	Rattan Head-loads.	45	...	187	...
	Khairáwood	...	...	6	...
	(3).—Removal of Produce for export on payment of fees.				
	Firewood Cart-loads.	14	...	16	...
	Do. Tons.	4,290	...	7,299	...
	Do. Stacks.	...	...	2	...
	Bámbus	8,02,292	...	6,20,800	...
	Dry do. Cart-loads.	...	...	208	...
	Earth Do.	...	...	61	...
	Baini trees	8	...	7	...
	Shigékái	...	5	...	...
	(4).—Free Grants of Forest Produce.				
	Junglewood	...	1,943	...	1,485
	Do. poles	269	...	605	...
	Bámbus	19,215	...	3,000	...
	Sheebs	...	...	8,650	...
	Firewood Cart-loads.	146	...	34	...
	Do. Head-loads.	800	...	525	...
	Rattans No.	200	...	...	...
Southern Division of Kánara.	(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency).				
	Teak	103	131	568	934
	Do. poles	1,492	478	1,788	483
	Do. round pieces for sleepers	38,329	...	6,942	...
	Teak slabs	44,515	...	690	...
	Sandalwood	2,437	69	609	6
	Do. whitewood chips Cart-loads.	12	...	12 ¹	...
	Do. saw-dust Sers.	...	...	12	...
	Blackwood	2	2	...	...
	Junglewood	479	622	431	619
	Do. poles	...	...	325	93
	Myrobolans	...	2,073	...	2,103-3
	Shigékái	...	11	...	57-12-20

Divisions.	Description.	1885-86.		1886-87.	
		Number of Logs.	Khandis.	Number of Logs.	Khandis.
Southern Division of Kánara—continued.	(2).—Removal of Produce by Purchasers for local consumption on payment of fees.				
	Teak	...	8	...	41
	Blackwood	...	7	...	2
	Junglewood	...	8,083	...	7,929
	Do. poles	246	...	25	...
	Firewood	3,535	...	3,744	...
	Do.	66,659	...	56,675	...
	Charcoal	286	...	284	...
	BámBUS	1,57,950	...	1,41,580	...
	Rattans	432	...	431	...
	Palmyra trees	136	...	89	...
	Thorns	29	...	16	...
	Hadchári leaves	80	...	...	...
	(3).—Removal of Produce for export on payment of fees.				
	Junglewood	...	299	...	...
Belgaum.	Teak	...	181	...	...
	Blackwood	...	2	...	...
	Firewood	...	18	...	...
	Shigebark	...	968	...	542-5
	BámBUS	1,23,825	...	19,350	...
	(4).—Free Grants of Forest Produce.				
	Junglewood	...	1,751	...	2,266
	Do. poles	...	375	...	297
	BámBUS	3,575	...	16,650	...
	Rattans	...	...	4	...
	(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency).				
	Teak logs	2	...	85	...
	Do. round pieces for sleepers	13,714	...	7,918	...
	Do. poles	4,247	...	2,110	...
	Do. slabs	7,400	...	14,189	...
	Do. end pieces	921	...	760	...
	Sandalwood pieces	8	...	...	...
	Blackwood	43	...	...	...
	Do. poles	...	...	3,772	...
	Junglewood	1	...	...	...
	Do. poles	26,088	...	12,500	...
	Firewood	18,284	...	12,375	...
	Do.	94	...	54	...
	Do.	19,239	...	19,275	...
	Do.	91,700	...	14,64,645½	...
	Myrobolans	...	7,679	...	1,800
	Do.	...	...	55,639	...
	(2).—Removal of Produce by Purchasers for local consumption on payment of fees, and				
	(3).—Removal of Produce for export on payment of fees.				
	Sandalwood pieces	...	...	4	...
	Teak poles	45	...	8	...
	Blackwood	2	...	5	...
	Junglewood	3	...	...	...

Divisions.	Description.	1885-86.		1886-87	
		Number of Logs.	Khandia.	Number of Logs.	Khandia.
Belgaum—continued.	(2).—Removal of Produce by Purchasers for local consumption on payment of fees, and				
	(3).—Removal of Produce for export on payment of fees—continued.				
	Junglewood pieces and poles	3,067	...	2,681	...
	Do. rafters	75	...	105	...
	Bámbus	2,47,610	...	4,06,341	...
	Firewood ... Stacks and Cart-loads.	4,576	...	2,950	...
	Do. ... Head-loads.	57,287	...	97,018	...
	Do. ... Bullock-loads.	...	...	429	...
	Charcoal ... Maunds.	4,530	...	1,040	...
	Thorns ... Cart-loads.	...	...	78	...
	Do. ... Head-loads.	384	...	171	...
	Rattans ... Do.	324	...	234	...
	Shigékái ... Maunds.	575	...	375	...
	Honey ... Do.	45	...	50	...
	Stone ... Cart-loads.	4,222	...	5,605	...
	Do. ... Bullock-loads.	...	...	820	...
	Do. ... Cubic feet.	...	...	1,87,718	...
	Earth ... Cart-loads.	...	...	105	...
	Sand ... Cubic feet.	...	...	32,593	...
	Kárvi ... Cart-loads.	183	...	267	...
	Nim trees	...	...	3	...
	Bábulwood	...	...	32	...
	Tárvád bark ... Bullock-loads.	...	...	148	...
	Coffee ... Sers.	...	...	35	...
	Tamarind... Maunds.	...	...	10	...
	Grass pullies	2,882	...	100	...
	Sale of toddy trees	38	...	88	...
	Tapping do.	132	...	91	...
	Gum ... Maunds.	25	...	20	...
	(4).—Free Grants of Forest Produce.				
	Junglewood	1,175	246	1,822	301
	Do. poles	126	10	3,086	206
	Bámbus	7,600	...	2,910	...
Dhárwár.	(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency).				
	Teak rafters	15,793	...	14,849	...
	Junglewood rafters	2,946	...	1,710	...
	Sleepers	...	...	4,868	...
	Round pieces for sleepers	...	...	74	...
	Slabs	...	...	6,818	...
	Agricultural implements	32,112	...	27,804	...
	Firewood... Stacks.	9,126	...	6,752	...
	Sandalwood ... Billets.	...	14	1,678	...
	Do. ... Pieces.	372	...	80	...
	Do. ... Chips.	...	2	...	8½
	Myrobolans	...	10	...	3
	(2).—Removal of Produce by Purchasers for local consumption on the payment of fees.				
	Teak rafters	308	...	1	...
	Blackwood rafters	2	...	...	...
	Junglewood do.	220	...	26	...
	Agricultural implements	1,433	...	580	...
	Firewood... Cart-loads.	953	...	397	...
	Do. ... Donkey-loads.	8,785	...	1,765	...

Divisions.	Description.	1885-86.		1886-87.	
		Number of Logs.	Khandis.	Number of Logs.	Khandis.
Dhárwár—continued.	(2).—Removal of Produce by Purchasers for local consumption on payment of fees—continued.				
	Firewood Buffalo-loads	...	...	...	...
	Do. Head-loads.	20,336	...	17,817	...
	BámBUS	3,11,991	...	3,64,199	...
	Dry bámBUS Head-loads.	5,563	...	11,791	...
	Thorns Bullock-loads.	71	...	111	...
	Do. Cart-loads.	1,445	...	1,219	...
	Stones Do.	4,578	...	4,311	...
	Do. Cubic feet.	...	...	2,200	...
	Grass pullies	26,375	...	15,075	...
	Do. Head-loads.	3,937	...	4,087	...
	Do. Cart-loads.	...	...	3	...
	Earth Do.	39	...	327	...
	Do. Buffalo-loads.	48	...	...	...
	(4).—Free Grants of Forest Produce.				
	Teak	...	...	38	...
	Junglewood	...	...	112	...
Bijápúr.	(2).—Removal of Produce by Purchasers for local consumption on payment of fees.				
	Sandalwood pieces	1	...	20	...
	Timber Cart-loads.	238½	...	152	...
	Do. Pieces.	211	...	17	...
	Do. Cubic feet.	...	...	557	...
	Jantis Head-loads.	11,452	...	6,471	...
	Firewood... .. Cart-loads.	3,034	...	3,702	...
	Do. Bullock-loads.	5,689	...	4,899	...
	Do. Donkey-loads.	8,895	...	13,316	...
	Do. Horse-loads.	183	...	242	...
	Do. Head-loads.	81,928	...	1,25,898	...
	Shindi-trees	...	...	400	...
	Thorns Heaps.	748	...	710	...
	Do. Head-loads.	548	...	743	...
	Leaves Do.	5,348	...	6,794	...
	Do. Bullock-loads.	115	...	71	...
	Tárvád bark Do.	...	...	516	...
	Do. Cart-loads.	...	...	8	...
	Do. Head-loads.	...	...	1,658	...
	Stones Cart-loads.	18,515	...	24,047	...
	Do. Bullock-loads.	4,247	...	982	...
	Do. taken by the Southern Marátha Railway Company	...	...	...	...
	Do. Cubic feet.	11,36,653	...	3,69,011	...
	Do. Head-loads.	2,982	...	3,686	...
	Earth Cart-loads.	292	...	527	...
	Do. Bullock-loads.	1,320	...	4,598	...
	Do. Head-loads.	2,918	...	1,600	...
	Do. Donkey-loads.	2,404	...	3,735	...
	Grass bundles	26,000	...	...	...
	Gum Maunds.	...	...	10	...
	Honey Do.	...	...	3	...
Kolába Division.	(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency).				
	Teak beams	442	...	744	...
	Poles, 1st class	1,506	...	2,306	...
	Do. 2nd do.	2,013	...	3,167	...

Divisions.	Description.	1885-86.		1886-87.	
		Number of Logs.	Khandis.	Number of Logs.	Khandis.
Kolába Division—continued.	(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency)—continued.				
	Poles, 3rd class	2,061	...	3,574	...
	Do. 4th do.	1,833	...	2,087	...
	Miscellaneous pieces	1,655	...	2,909	...
	Shigékái	...	12	...	...
	(2).—Removal of Produce by Purchasers for local consumption on payment of fees and				
	(3).—Removal of Produce for export on payment of fees.				
	Teak pieces including beams	1,11,417	...	1,25,559	...
	Poles, 1st class				
	Do. 2nd do.				
	Do. 3rd do.				
	Do. 4th do.				
	Miscellaneous pieces	98,795	...	55,000	...
	Firewood... .. Kowl Khandis.				
	(4).—Free Grants of Forest Produce.				
	Teak rafters	2,297	...	5,984	...
Ratnágiri Division.	(1).—Through Departmental Operations (Forest Produce brought to Depôts by Government Agency).				
	Beams	1,676	...	1,766	...
	Poles, 1st class	2,640	...	2,568	...
	Do. 2nd do.	5,280	...	4,574	...
	Do. 3rd do.	6,397	...	7,205	...
	Do. 4th do.	4,955	...	4,937	...
	Miscellaneous pieces	6,940	...	5,534	...
	Firewood... .. Cubic feet.	39,372	...	1,076½	...
	Hirda	...	8	...	4½

58. The principal variations, as compared with the previous year, are as follows :—

A.—NORTHERN, CENTRAL, AND SOUTHERN DIVISIONS OF KANARA.

1.—DEPARTMENTAL OPERATIONS.

59. The outturn of teak brought to depôts exceeded that of the previous year by 6,206 logs measuring 12,901 khandis, but the number of teak-poles and of round pieces for sleepers was less by 12,984 and 1,60,130, respectively.

60. The outturn of sleepers was 89,990 against 2,94,379 in the previous year.

61. Of blackwood there was a decrease of 484 khandis.

62. The junglewood brought in was more by 1,049 khandis; in 1885-86 1,957 khandis were brought in, and in 1886-87 3,006 khandis.

63. The yield in myrobolans was 4,817 khandis in 1886-87 and 4,836 in 1885-86.

64. The sandalwood was 19 khandis in 1886-87 and 82 in the previous year.

2.—REMOVALS BY PURCHASERS.

65. The yield exceeded the previous year's yield by 2,296 khandis of jungle-wood, 19 khandis of teak, 211 of blackwood, 1,39,905 bámbus, 1,559 cart-loads of firewood, 3,559 head-loads of firewood, and 11,62,867 cubic feet of firewood.

66. On the other hand, there was a falling-off of 104 khandis of jungle-wood, 1,59,067 bámbus, and 9,028 tons of firewood removed for export.

67. The free grants made in the Kánara districts are as follows :—

					Value.		
					Rs.	a.	p.
1885-86	...	...	...	...	17,004	5	2
1886-87	...	...	...	...	17,699	0	9

B.—BELGAUM.

1.—DEPARTMENTAL AGENCY.

68. Almost all the items under the head of Departmental Operations show a decrease, but this is more than compensated for by the quantity of firewood supplied to the Southern Marátha Railway Company, which amounted to 14,64,645½ cubic feet, against 91,700 cubic feet supplied during the previous year.

69. The yield of myrobolans was 19,252 baskets less than in 1885-86. The crop of the preceding year was extraordinarily good.

2.—REMOVALS BY PURCHASERS.

70. Under this heading 1,58,731 bámbus, 429 bullock-loads, and 39,731 head-loads of firewood were removed in excess of the quantity extracted during the previous year. Also a greater quantity of stones and earth was removed.

71. The free grants made are as under :—

					Value.		
					Rs.	a.	p.
1885-86	...	...	...	...	767	6	8
1886-87	...	...	...	...	1,372	0	4

C.—DHA'RWA'R.

72. The yield in all the items, excepting bámbus and sandalwood, shows a decrease; but, as a set off to this, 5,102 sleepers, 9' x 8" x 5", were supplied to the Southern Marátha Railway Company.

73. Forest rights have been granted to Inámdárs throughout the district and the sale from their forests to a great extent relieved the Government forests from the strain which the increased demand for wood would otherwise have brought upon them.

D.—BIJAPUR.

74. The items of increase in the yield of the year are chiefly firewood, timber, thorns, tárvád bark, leaves, and earth.

75. A considerable quantity of small-wood was sold from the private forests of Inámdárs; hence the decrease in the quantity removed from the Government forests.

E.—KOLA'BA.

76. The yield in teak-beams and pieces of all classes removed during the year shows a marked increase, but the firewood removed was less by 43,795 kowl-khandis.

F.—RATNA'GIRI.

77. All the items show a decrease in the year's yield, excepting teak-beams, which were 90 in excess of the previous year.

78. The following exhibits the free grants of wood made in the last 3 Divisions during the year :—

					Value.		
					Rs.	a.	p.
Dhárwár	...	...	...	...	350	0	0
Kolába	...	...	...	...	2,199	0	0
Ratnágiri	...	...	...	...	265	8	0

79. The free grants made had the special sanction of Government.

KA'NARA SAW-MILLS.

80. The Saw-Mills at Kannigeri worked, in all, 297 days during the year, and 289 days in the previous one. Timber, amounting to 40,566 cubic feet of teak, 238 of blackwood, and 948 of junglewood, or 41,752 cubic feet in all, was cut up, but only 23,700 in 1885-86. In addition, six-feet sleeper-pieces were converted into 375 cubic feet of sawn timber.

81. The outturn in clean timber exceeded that of the previous year by 7,839 cubic feet, that in the year 1886-87 being 25,758 cubic feet against 17,919 in 1885-86, but during the year under report only 348 sleepers were cut up at Kannigeri. The percentage of wastage in cutting-up teak was 38·8 in 1886-87 and 24·3 in 1885-86. This increase is owing to the logs being defective.

82. The wastage for blackwood cannot be fairly stated. The demand for blackwood from the Saw-Mills is very small, and each order, however small, generally necessitates the cutting-up of a whole log, the remaining portion of which is not converted into sawn timber, nor can it be returned to the Depôt-account ; and as a sawn blackwood-log quickly splits and deteriorates, what remains after cutting is generally useless.

83. The wastage in junglewood was also high, viz., 70·5 per cent. During the whole year the outturn was only 279 cubic feet ; the demand was so small that no logs have lately been brought to Depôt, and such logs as have been brought were lying in the jungles for some years. Unless junglewood logs are cut up soon after they have been felled and squared, they crack and develop numerous defects, and scarcely yield more than $\frac{1}{4}$ of their depôt-measurements in clean timber.

84. The machinery at Kirwatti cut up 4,197 sleepers $6' \times 8" \times 4\frac{1}{2}"$, $6' \times 10" \times 4\frac{1}{2}"$, and $7' \times 9" \times 5"$, and, from defective sleepers, 63 cubic feet of clean timber for the Southern Marátha Railway Company.

85. The sleeper saw-machinery at Kolikeri worked up till 31st December 1886, when, in consequence of stoppage of No. 3 engine for repairs to the boiler at Kannigeri, the engine and the machinery were removed to Kannigeri, and have ever since remained there.

86. During the period the machinery was at Kolikeri, 4,761 sleepers were cut up, and 2,838 cubic feet of clean timber was cut up entirely from defective sleeper-pieces and slabs.

87. The receipts at the Mills were Rs. 77,619. Of this sum Rs. 51,311 were realized from clean timber and Rs. 26,308 from sleepers. In the previous year Rs. 22,154 from clean timber and Rs. 92,198 from sleepers were obtained, and the expenditure was Rs. 13,716 in 1886-87 against Rs. 26,944 in 1885-86.

88. An accident to the machinery occurred at Kannigeri on the 15th July by the piston-rod-nut of one of the engines getting loose ; the piston was smashed to pieces, the piston-rod bent badly, the cylinder scored, and the crank shaft bent. As the Kirwatti engine was out of repair at the same time, and was a sister-engine to the one damaged at Kannigeri, the piston-rod and crank shaft were at once brought from Kirwatti to replace the damaged portions at Kannigeri. The Divisional Officer, Mr. Haselden, got a new piston and rod made at Hubli, and then fitted them at Kannigeri, and the engine has been working with them since the 25th August 1886.

89. During the year, No. 3 boiler sprung a leak several times, but so badly on the 10th December as to render the boiler useless and not worth repairing. The purchase of a new one was conditionally sanctioned by Government.

90 (5). The following table gives summary of produce removed from the forests :—

Description of Produce.				1885-86.	1886-87.
Teak	...	...	... Khandis.	10,233	22,972
Do. sleepers	...	...	...	.....	4,868
Do. round pieces for sleepers	...	...	...	2,09,409	43,557
Do. poles or rafters...	...	...	...	1,89,748	1,97,915
Do. slabs, pieces, sotás, &c.	...	...	...	1,676	30,900
Do. beams	...	...	...	442	1,766
Blackwood	...	...	... Khandis.	567	410
Do. rafters, poles, and pieces	...	...	...	2	3,800
Ebonywood	...	...	...	5	.....
Sandalwood	...	...	... Khandis.	98	19
Do. billets, &c.	...	...	...	.....	1,778
Do. whitewood chips	...	...	... Carts.	.....	12½
Do. saw-dust...	...	...	... Sers.	.....	12
Do. chips	...	...	... Khandis.	.....	8½
Junglewood	...	...	... Do.	26,062	28,854
Do. rafters, poles, and pieces	...	...	...	44,262	31,940
Timber	...	...	... Cart-loads.	238	152
Do. pieces	...	...	...	.....	17
Do.	...	...	... Cubic feet.	.....	557
Jantis	...	...	... Head-loads.	11,452	6,471
Miscellaneous pieces	...	...	... Nos.	8,595	8,443
Myrobolans	...	...	... Khandis.	12,562	6,628½
Do.	...	...	... Baskets.	.....	55,639
Shigékái pods	...	...	... Khandis.	62	437
Do. bark	...	...	... Do.	48	542
Bámbus	...	...	... No.	40,57,483	42,55,241
Dry do.	...	...	... Cart-loads.	.....	208
Do.	...	...	... Head-loads.	5,563	11,791
Sheebs	...	...	...	.....	8,650
Firewood...	...	...	... Tons.	25,609	16,659
Do.	...	...	... Cart-loads.	41,917	13,435
Do.	...	...	... Head-loads.	3,50,652	4,34,254
Do.	...	...	... Donkey-loads.	11,680	15,081
Do.	...	...	... Bullock-loads.	5,689	5,328
Do.	...	...	... Horse-loads.	183	242
Do.	...	...	... Kowl Khandis.	98,795	55,000
Do.	...	...	... Stacks.	.....	20,914
Do.	...	...	... Cubic feet.	1,35,365	26,32,882
Charcoal	...	...	... Khandis.	329	142½
Brakes for traffic carts	...	...	... No.	1,653	...
Agricultural implements	...	...	...	33,670	29,027
Thorns	...	...	... Cart-loads.	1,474	1,313
Do.	...	...	... Head-loads.	932	914
Do.	...	...	... Bullock-loads.	71	111
Do.	...	...	... Heaps.	748	710
Stones	...	...	... Cart-loads.	27,315	29,963
Do.	...	...	... Bullock-loads.	4,247	1,802
Do.	...	...	... Head-loads.	2,932	3,686
Do.	...	...	... Cubic feet.	11,36,653	5,58,929
Earth	...	...	... Cart-loads.	331	1,020
Do.	...	...	... Buffalo-loads.	48	.....
Do.	...	...	... Bullock-loads.	1,320	4,598
Do.	...	...	... Donkey-loads.	2,404	3,735
Do.	...	...	... Head-loads.	2,918	1,600
Bábulwood	...	...	...	.....	32
Tárvád bark	...	...	... Cart-loads.	.....	8
Do.	...	...	... Bullock-loads.	.....	664
Do.	...	...	... Head-loads.	.....	1,658
Honey	...	...	... Maunds.	45	53
Rattan or cane	...	...	... Loads.	1,005	435
Do.	...	...	... Head-loads.	.....	473
Kárvi	...	...	... Cart-loads.	183	267
Do.	...	...	... Head-loads.	48	1,513
Hadchari leaves	...	...	... Maunds.	80	.....

Description of Produce.				1885-86.	1886-87.
Leaves	...	...	Head-loads.	5,348	6,794
Do.	...	...	Bullock-loads.	115	71
Palmyra trees	...	...	No.	136	89
Toddy trees	...	...	"	170	88
Tapping trees ... ..	...	...	...	.....	91
Baini trees	...	...	...	14	59
Gum	...	...	Maunds.	25	30
Grass bundles or pullies	...	...	...	9,88,040	92,775
Grass	...	...	Head-loads.	3,937	4,087
Do.	...	...	Cart-loads.	.....	3
Sand	...	...	Cubic feet.	.....	32,593
Creeper for baskets ... ..	...	...	...	.....	1,643
Coffee	...	...	Sers.	.....	35
Pamarind	...	...	Maunds.	.....	10
Nim trees ... ..	...	...	...	.....	3
Shindi trees ... ..	...	...	...	.....	400

CHAPTER V.

FINANCIAL RESULTS.

91. The details of the financial results and of the year's transactions are shown in accompanying forms, Nos. 58 to 62.

92. The receipts and expenditure of the Southern Circle for the years 1885-86 and 1886-87 were :—

Year.				Receipts.	Charges.	Surplus or Net Revenue.
				Rs.	Rs.	Rs.
1885-86	...	...	...	17,92,114	7,22,586	10,69,528
1886-87	...	...	...	14,33,793	6,94,614	7,39,179

93. Thus, the gross receipts in 1886-87 are less than in the previous year by Rs. 3,58,321, and the charges are less by Rs. 27,972. The receipts have, however, considerably exceeded those of all past years, excepting 1885-86. During that year the revenue on account of teak-sleepers alone amounted to over 6 lakhs of rupees. In the year 1886-87 far fewer sleepers were supplied, and this accounts for the decrease. In respect of ordinary revenue, the results are quite satisfactory.

94. Form No. 58, appended, shows the receipts and expenditure for each division under the several sub-heads.

95. The following statement shows the figures for 1885-86 and 1886-87 under each main head :—

Heads of Revenue and Charges,		1885-86.	1886-87.	Increase.	Decrease.
RECEIPTS.		Rs.	Rs.	Rs.	Rs.
I.—Timber and other produce removed from the forests by Government agency ...	...	13,55,730	10,17,495	...	3,38,235
II.—Timber and other produce removed from the forests by consumers or purchasers .	...	4,17,509	3,93,268	...	24,241
III.—Confiscated drift and waif wood ...	...	2,011	7,594	5,583	...
IV.—Revenue from forests not managed by Government ...	...	2,926	207	...	2,719
V.—Miscellaneous ...	...	13,938	15,229	1,291	...
Total Receipts ...	...	17,92,114	14,33,793	6,874	3,65,195

... from the				
Heads of Revenue and Charges.	1885-86.	1886-87.	Increase.	
EXPENDITURE.	Rs.	Rs.	Rs.	Rs.
<i>A.—Conservancy and Works.</i>				
I.—Timber and other produce removed from forests by Government agency ...	4,25,536	3,90,532	...	3,04
II.—Timber and other produce removed from the forests by consumers or purchasers...	15,054	5,077	...	9,97
III.—Confiscated drift and waif wood ...	143	225	82	...
V.—Rent of leased forests and payments to shareholders in forests managed by Government ...	25,771	16,419	...	9,3
VI.—Live-stock, stores, tools and plant ...	2,967	1,575	...	1,3
VII.—Communications and buildings ...	5,957	6,552	595	...
VIII.—Demarcation, improvement, and extension of forests ...	20,324	23,518	3,194	...
IX.—Miscellaneous ...	527	637	110	...
Total A.—Conservancy and Works ...	4,96,279	4,44,535	3,981	55,7
<i>B.—Establishment.</i>				
I.—Salaries ...	1,74,879	1,99,124	24,245	...
II.—Travelling allowances ...	36,971	34,726	...	2,245
III.—Contingencies...	14,457	16,229	1,772	...
Total B.—Establishments ...	2,26,307	2,50,079	26,017	2,245
Total Charges—A and B ...	7,22,586	6,94,614	29,998	57,970

RECEIPTS.

96. Under the sub-head *a* of *I* the decrease occurs chiefly in the 3 divisions of Kánara and in Ratnágiri. In the former it is owing to a less number of sleepers having been supplied to the Southern Marátha Railway Company, and in the latter to unfavourable sales. On the other hand, the revenue in Dhárwár and Belgaum show a considerable increase over that of the previous year.

97. The revenue under *I b—Firewood and Charcoal*—shows an increase of Rs. 64,905. This is due to increased quantities of fuel having been supplied to the Railway Company from Belgaum, where the receipts rose from Rs. 18,888 in 1885-86 to Rs. 89,486 in 1886-87. The revenue under this head cannot in future be less, unless the Railway Company substitute coal for wood.

98. The revenue from sandalwood and myrobolans has fallen off this year. In the case of the former, cuttings were curtailed owing to the market having been glutted with sandalwood from Inámdárs' forests. In that of the latter, the prices obtained for the season's crop were bad.

99. The receipts under *II a* were Rs. 1,73,610 against Rs. 1,54,430 in 1885-86.

100. There was a decrease in the whole Circle under *II c*, owing to bámbus having seeded in certain tracts, but the revenue of the Northern Division of Kánara shows an increase. A decrease is also met with under *II d—Grazing and Fodder Grass*—owing to murrain. The decrease under *II e* is due to the sales of minor produce (which is farmed out) not having been as favourable as in the previous year.

101. On the side of expenditure there is a decrease of Rs. 27,972 in the total figures. The only item of increase calling for remark is under *B I c*. The increase is owing to the re-organization of the Subordinate Protective Establishment sanctioned in Government Resolution No. 2913 of the 13th October 1885.

CHAPTER VI.

GENERAL REMARKS.

102. Colonel W. Peyton retired from Civil Service on the 27th December 1886, and was succeeded in the Conservatorship by me.

103. Mr. Hight resumed charge of the Bijápur Division on the 31st May from Mr. Fernandez, who returned to his permanent post at Belgaum.

104. Mr. R. P. Ryan was transferred to Kolába and Mr. Stewart to Ratnágiri.

105. For three months, during Mr. Murray's absence on leave, Mr. Hight had charge of Dhárwár and Bijápur. He handed over charge of the latter to Mr. G. M. Ryan on the 30th March, and took permanent charge of Dhárwár in place of Mr. Murray, transferred to Belgaum.

106. Mr. D'Cruz held charge of Belgaum from 15th January to 14th March.

107. No other important changes or postings of officers of the Department took place during the year.

108. The following officers conducted the settlement work :—

In Kánara Mr. Lucas up to the 12th October, and from that date Mr. R. T. Wingate. In Belgaum, Mr. Woodward. In Kolába Mr. Sinclair, assisted by Mr. Haripad Mitra. In Ratnágiri, Mr. Logan; and in Bijápur, Mr. Tucker.

109. The system adopted in Kánara and Kolába, of selecting and demarcating forests before the proposed areas and classification have received the sanction of Government, has this drawback, that if Government does not approve everything a settlement officer has proposed, much unnecessary expense may have been incurred, as the erection of boundary-marks and the clearing of rides separating protected from reserved and portions of excluded from included forests are a heavy charge in most demarcation work. The system appears to be peculiar to Kánara and Kolába.

110. Messrs. Barrett and Talbot continued on furlough during the year.

111. Mr. D'Cruz was granted a further extension of service to 21st October 1888.

112. Three men, sent to study forestry at the Poona College in 1885, failed to pass the final examination, but were allowed to continue their studies. There are now 4 men from this Circle studying at Poona.

113. Colonel Peyton had charge of the Circle during nine months of the year, and I am authorized by him to state that he is perfectly satisfied with the work of the officers who served under him during that time. I can say the same of them for the short period during which I had charge of the Circle.

114. The following account shows the movements of Colonel Peyton and myself during the season :—

At the commencement of the year the Conservator's camp was at Sirsi. Thence Colonel Peyton returned to Yellápur on the 19th May 1886. He left Yellápur, with office, on the 3rd July for Poona, which was reached on the 5th idem, and remained there to attend the sittings of the Forest Commission till 8th October, on which day he left for Yellápur for the purpose of holding hirda sales, and returned to Poona on the 29th October. The sittings of the Commission having been adjourned on the 22nd November 1886, Colonel Peyton went to Yellápur, with office, and remained there till the 15th December, when he again proceeded to Poona. The Commission having closed its sittings, Colonel Peyton returned to Yellápur on the 20th. On the 26th he marched to Haliyál, and on the 27th delivered over charge of the Conservator's office to me.

From Haliyál I went to Nagargali, where operations for the supply of fuel to the railway were in progress, and thence started for Dhárwár, which was reached on the 18th January.

At Dhárwár I met the Divisional Officer, and his office accounts were examined. Camp was then moved to Háveri, *via* Hubli and Bankápur. From Háveri camp was moved to Guttal, returning on the 7th February to Háveri.

On the 10th I left for Hángal, and thence proceeded to Sirsi, through Yekambi. At Sirsi I was met by the Divisional Officer, and Mr. Wingate, the Forest Settlement Officer.

On the 21st February camp was changed to Kansur, and the next day Siddápur was reached. From there I went on to Kodkani, and returned on the 27th.

On the 2nd March Sirsi was reached. From Sirsi I proceeded to Malgi, and halted there till the 11th, arriving at Yellápur *via* Mundgod on the 15th. There I visited the Saw Mills. The Divisional Officer, Mr. B. J. Haselden, was also there, and his office accounts were examined. On the 22nd camp was moved to Kolikeri, and thence to Kirwatti on the 27th, where sleeper operations were inspected. On the 1st April 1887 my camp was at Tattihalla.

J. L. L. MacGREGOR,
Conservator of Forests, S.C.

*Conservator's Office, S. C.,
Camp Belgaum, 18th October 1887.* }

*List of Statements accompanying the Forest Administration Report of the
Conservator of Forests, Southern Circle, for 1886-87.*

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49 A.	Area of Protected Forests, 1886-87.
50	Register of breaches of Forest Rules during 1886-87.
51	Area of Forest Tracts protected from fire during the dry season of 1886.
52	Area of Plantations, 1886-87.
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54	Outturn of Timber and Firewood during the year 1886-87.
55	Outturn of Minor Produce for 1886-87.
56	Account of Timber and other produce cut or collected by Government agency and brought to sale depôts or sold locally during the year 1886-87.
57	Abstract showing the value of Timber and other produce at sale depôts for the year 1886-87.
58	Summary of Revenue and Expenditure of the different Divisions during the year 1886-87.
59	Account current for the year 1886-87.
60	Revenue received and outstandings on account of revenue during 1886-87.
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62	Financial results of the year 1886-87.

J. L. L. MACGREGOR,
Conservator of Forests, S.C

A.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Statement showing the Progress of the Forest Demarcation and Settlement Work up to 1st April 1887.

Circle.	Districts.	AREA ORIGINALLY AND, AS A PRELIMINARY MEASURE TO FINAL SETTLEMENT, DECLARED UNDER THE FOREST ACT, 1878.						AREA FINALLY DISPOSED OF UP TO THE 1ST APRIL 1887.						AREA REMAINING TO BE DEALT WITH.						Remarks.
		Reserved Forest.		Protected Forest.		Total of both.		Reserved Forest.		Protected Forest.		Total of both.		Reserved Forest.		Protected Forest.		Total of both.		
		Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	Square Miles.	Acres.	
Southern Circle.	Kánara ...	466	350	3,048	24	3,514	374	469	161	322	93	791	254	214	439	2,508	321	2,723	120	
	Belgaum	447	541	262	46 ⁹ / ₁₀	709	587 ⁹ / ₁₀	184	198	165	168 ⁹ / ₁₀	349	366 ⁹ / ₁₀	360	221	...	...	360	221	
	Dhárwár	171	425	260	261	432	46	171	425	260	261	432	46	...	...	...	...	...	...	
	Kolába ...	293	367 ¹ / ₂	84	144 ¹⁹ / ₁₀	377	511 ²⁹ / ₁₀	147	268	47	54	194	322	146	99 ¹ / ₂	37	90 ¹³ / ₁₀	183	189 ²⁹ / ₁₀	
	Bijápúr...	155	115	89	409	244	524	...	...	...	...	...	...	155	115	89	409	244	524	
	Ratnágiri	20	13	...	...	20	13	...	...	...	...	...	...	20	13	...	...	20	13	
Total		1,554	531 ¹ / ₂	3,744	244 ⁷ / ₁₀	5,299	1351 ⁹ / ₁₀	972	412	794	576 ⁹ / ₁₀	1,767	348 ⁹ / ₁₀	896	247 ¹ / ₂	2,635	180 ¹³ / ₁₀	3,531	427 ²⁹ / ₁₀	

J. L. L. MACGREGOR,
Conservator of Forests, S. C.

Conservator's Office, S. C.,
Dated Belgaum, the 18th October 1887. }

FORM No. 49.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Area of Reserved Forests, 1886-87.

Division or Range.	Civil District or Territory.	Name of Forest.	Area on 1st April 1886.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1887.		Number and Date of Notification of addition or transfer.	Remarks.
			Acrea.	Equivalent in Square Miles.			Acrea.	Equivalent in Square Miles.		
Northern Division, Kánara.	Kánara	Haliyál and Kárwár	2,98,437	466	...	...	2,98,437	466	...	
Central Division, Kánara.	Do.	Mundgod and Ankola	1,17,359	184	...	...	1,17,359	184	...	
Southern Division, Kánara.	Do.	Sirsi	21,771	34	...	...	21,771	34	...	
Belgaum	Belgaum	Khánápur, Belgaum, Chikodi, Gokák, Sampgaon and Athni.	3,14,962	492	...	...	3,14,962	492	...	
Dhárwár	Dhárwár	Dhárwár, Kód, Gadag, Ron, Nargund, Hubli and Ranebennur.	1,09,865	172	...	...	1,09,865	172	...	
Kolába...	Kolába	Alibág, Panvel, Pen, Roha, Mahád and Mángaon.	1,87,888	294	3,944 ¹ / ₁₀	2	1,91,831 ¹ / ₁₀	300	...	
Bijápur	Bijápur	Bádámi, Hungund, Bijápur, Bágewadi, Muddebihal and Indi.	99,315	155	...	...	99,315	155	...	
Ratnágiri	Ratnágiri	Dápoli, Khed, Rájápur, Málvan, Chiplún, Sangameshvar.	12,813	20	...	...	12,813	20	...	
		Total	11,62,410	1,816	3,944 ¹ / ₁₀	2	11,66,353 ¹ / ₁₀	1,823	...	

Conservator's Office, S. C.,
Dated Belgaum, the 18th October 1887.

J. L. L. MacGREGOR,
Conservator of Forests, S. C.

FORM No 49A.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Area of Protected Forests, 1886-87.

Division or Range.	Civil District or Territory.	Name of Forest.	AREA ON 1ST APRIL 1886.		ADDED DURING THE YEAR.	EXCLUDED OR TRANSFERRED TO OTHER HEADS.	AREA ON 31ST MARCH 1887.		Number and Date of Notification of addition or transfer.	Remarks.
			Acres.	Equivalent in Square Miles.			Acres.	Equivalent in Square Miles.		
Northern Division, Kánara.	Kánara	Supa	4,62,944	723	...	...	4,62,944	723	No. 4498 of 22nd June 1886.	
Central Division, Kánara.	Do.	Yellápur, Mundgod, Kunta and Ankola	5,68,209	888	...	...	5,68,209	888		
Southern Division, Kánara.	Do.	Sirsi, Siddápur, Honávar, and Bhatkal.	8,02,438	1,254	...	...	8,02,438	1,254		
Belgaum	Belgaum	Belgaum, Chikodi, Gokák, and Paragad.	1,26,287	197	16 $\frac{3}{4}$	...	1,26,303 $\frac{3}{4}$	197		
Dhárwár	Dhárwár	Dhárwár, Kalghatgi, Bankápur, Kod, Hángal, Gadag, Ránebeunnur, Karajgi, and Hubli.	1,66,661	260	...	...	1,66,661	260		
Kolába	Kolába	Alkáb, Panvel, Pen, Roha, Mahád, Mángaon, and Nágothna	58,369	91	3,036 $\frac{13}{40}$	4,464 $\frac{21}{40}$	56,940 $\frac{31}{40}$	89		
Bijápur	Bijápur	Bagalkot, Hungund, Bijápur, Bágévádi and Indi.	364	1	...	...	364	1		
		Total	21,85,272	3,414	3,052 $\frac{21}{40}$	4,464 $\frac{21}{40}$	21,83,860	3,412		

J. L. L. MACGREGOR,
Conservator of Forests, S. C.Conservator's Office, S. C.,
Dated Belgaum, the 18th October 1887. }

FORM No. 50.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Prosecutions for Breaches of Forest Rules during 1886-87.

Forest Division and Civil District.	Cases pending from 1886-87.	NEW CASES OF THE YEAR.					Total Cases.	DISPOSED OF DURING THE YEAR.				Cases pending at close of year.		
		Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new Cases of the year.		CONVICTIONS.		ACQUITTALS.			TOTAL.	
								Cases.	Persons.	Cases.	Persons.			Cases.	Persons.
Kánara District.														
Northern Division, Kánara	2	...	3	...	...	3	5	2	2	2	2	4	4	1
Central Division, do.	...	...	3	...	2	5	5	2	2	3	4	5	6	...
Southern Division, do.	...	...	9	...	...	9	9	8	8	...	...	8	8	1
Belgaum District.														13
Belgaum ...	...	...	8	...	8	16	16	8	10	4	11	12	21	4
Dhárwár District.														
Dhárwár ...	...	...	8	...	3	11	11	5	5	6	10	11	15	...
Bijápúr District.														
Bijápúr ...	2	1	10	...	...	11	13	10	37	3	14	13	51	...
Ratnágiri District.														
Ratnágiri ...	7	3	10	1	1	15	22	19	45	2	23	21	68	1
Kolába District.														
Kolába ...	...	...	77	...	1	78	78	61	323	17	34	78	357	...
Total ...	11	4	128	1	15	148	159	115	432	37	98	152	530	7

Dated Belgaum, the 18th October 1887.

J. L. L. MAC GREGOR,
Conservator of Forests, S. C.

FORM No. 51.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Area of Forest Tracts protected from Fire during the Dry Season 1887, to accompany Report for 1886-87.

Division.	Forest Tracts.	Year in which protection commenced.	Area actually protected up to 15th June 1886.	DURING DRY SEASON OF 1887.			Lost during the season.	Remarks.
				Area attempted to be protected.	Failures.	Actually protected.		
			Acres.	Acres.	Acres.	Acres.	Rs. a. p.	
Northern Division, Kánara.	Haliyál ...	1880 ...	1,56,071	1,61,191	10,880	1,50,311	67 8 0	
	Supa ...	1884-85 ...	2,24,000	4,00,000	1,20,000	2,80,000	.....	
	Kárwár ...	1880 ...	1,37,084	1,37,246	500	1,36,746	.....	
	Total ...		5,17,155	6,98,437	1,31,380	5,67,057	67 8 0	
Central Division, Kánara.	Yellápur ...	1884-85 ...	1,85,917	1,31,709	20,960	1,10,749	37 9 6	
	Mundgod ...	1881-82 ...	70,204	47,263	47,263	...	1 5 0	
	Ankola ...	1885-86 ...	1,93,124	20,000	2,500	17,500	.....	
	Kumta ...	" ...	1,52,711	380	380	...	.....	
	Total ...		6,01,956	1,99,352	71,103	1,28,249	38 14 6	
Belgaum ...	Belgaum ...	1885-86 ...	1,76,000	400	250	150	19 12 0	
	Khánápur ...	" ...	2,36,800	1,366	...	1,366	99 3 0	
	Chikodi ...	" ...	3,04,000	50	...	50	29 8 0	
	Total ...		7,16,800	1,816	250	1,566	148 7 0	
Dhárwár ...	Dhárwár ...	1883-84 ...	15,000	31,926	15,360	16,566	41 10 0	
	Kalghatgi ...		10,240	49,917	44,718	5,199	119 11 0	
	Bankápur ...		20,480	24,141	2,560	21,581	29 13 0	
	Hangal ...		8,527	21,134	5,095	16,039	.....	
	Kod ...	1886-87 ...	...	26,513	3,445	23,068	1 0 0	
	Gadag ...	" ...	...	46,759	35,077	11,682	.....	
	Total ...		54,247	2,00,390	1,06,255	94,135	192 2 0	
Bijápur ...	Bádámi ...	1874 ...	1,17,349	1,00,078	1,718	98,360	67 0 0	
	Bágalkot ...	" ...	67,433	57,588	1,500	56,088	85 0 0	
	Total ...		1,84,782	1,57,666	3,218	1,54,448	152 0 0	
Ratnágiri ...	Dápoli ...	...	2,775	2,793	3	2,790	.....	The w tecti carr. Fore.
	Chiplún ...	...	234	236	4	232	.....	
	Sangameshvar ...	...	2,639	2,710	87	2,623	.....	
	Málvan ...	...	406	64	5	59	.....	
	Total ...		6,054	5,803	99	5,704	.....	
Kolába ...	Alibág ...	...	29,715	30,155	125	30,030	0 8 0	
	Pen ...	...	70,958	71,838	336	71,502	0 4 6	
	Roha ...	...	39,127	39,203	11	39,192	1 1 0	
	Mángaon ...	...	32,640	27,980	1,136	26,844	.....	
	Mahád ...	...	30,754	31,901	149	31,752	.....	
	Panvel ...	...	32,694	34,288	1,749	32,539	1 0 0	
	Total ...		2,35,888	2,35,365	3,506	2,31,859	2 13 6	
	Grand Total		44,39,882	14,98,829	3,15,811	11,83,018	601 13 0	

Conservator's Office, S. C.,
dated Belgaum, the 18th October 1887.

J. L. L. MACGREGOR,
Conservator of Forests, S. C.

FORM No. 52.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Area of Plantations, 1886-87.

Division.	Name of Plantation.	AREA IN ACRES.				Receipts.	Charges.	Remarks.
		On 1st April 1886.	Added during the year.	Ex-cluded during the year.	Area on 31st March 1887.	Of the year.		
	<i>Regular Plantations.</i>					Rs. a. p.	Rs. a. p.	
Northern Division, Kánara...	Kadra	357	...	...	357	2 1 7	392 10 3	
	Mardi	110	...	...	110	.....	101 11 6	
	Sulgeri	110	...	...	110	.....	171 13 0	
	Kárwár	118	...	...	118	1,181 10 7	193 15 9	
	Bingi... ..	20	...	...	20	.....	.....	
	Barchi	221	...	...	221	.....	38 14 0	
	Singatgeri	83	...	...	83	328 0 0	78 10 0	
	Bomanhalli	200	...	...	200	.....	.....	
Central Division, Kánara ...	Devarbail teak plantation ...	15	...	...	15	7 4 0	.....	
	Arbail do.	5	...	...	5	.....	.....	
Southern Division, Kánara.	Kasargod	290	8	...	298	.....	3,095 9 7	
Belgaum...	Bidi	16	...	...	16	.....	.....	
Bijápur ...	Anantápur	82	5	...	87	.....	333 4 0	
	Mamdápur	160	4	...	164	.....	532 13 2	
Kolába...	Warsoli	10	...	...	10	.....	.....	
	Ramdharni	50	...	...	50	.....	.....	
	Rajwádi	12	...	...	12	.....	.....	
Total, Regular Plantations...		1,859	17	...	1,876	1,519 0 2	4,939 5 3	
	<i>Cultural Operations.</i>							
Central Division, Kánara ...	Sabasrawali	12	...	...	12	.....	.....	
	Yellápur	26	...	...	26	.....	103 15 3	
	Harwáda	1	...	...	1	6 0 0	9 13 6	
Southern Division, Kánara.	Banawasi	27	...	...	27	.....	.....	
	Anegundi	7	...	...	7	.....	.....	
	Kalkatti	2	...	...	2	.....	.....	
	Alalli... ..			Not known.		.....	.....	
Belgaum ...	17 villages in Khánápur ...	90	...	...	90	.....	.....	
	3 do. in Belgaum	22	...	...	22	.....	.....	
	Kalasgade	13	...	...	13	0 10 6	25 11 0	Watering coffee plan-tation.
	Deshnur	150	...	...	150	.....	63 0 0	Watering, &c.
Dhárwár ...	Holtikota	34	...	...	34	.....	2 13 0	
	Salkinkop	152	...	...	152	5 0 0	4 8 0	
	Gongdikop	28	...	...	28	.....	.....	
	Saptápur	35	...	...	35	10 0 0	3 0 0	
	Kelgeri	21	...	...	21	50 0 0	5 2 6	
	Kalghatgi	399	...	...	399	.....	23 5 0	
	Ichanhalli	86	...	...	86	.....	24 1 0	
	Devikop	25	4	...	29	.....	34 5 6	
Bijápur ...	Mamdápur	170	20	...	190	.....	2,431 4 4	In these charges is included the cost of burning fire-paths round the plantations, viz., Rs. 88-8-0.
	Kaládgi	195	...	...	195	.....	712 4 6	
	Jacknur	...	9	...	9	.....	143 4 0	
Kolába ...	Alibág	5	...	...	5	.....	17 13 0	
	Sáttád	81	...	...	81	.....	31 4 0	
Ratnágiri ...	Dápoli	290	70	246	114	.....	28 0 6	
	Khed... ..	70	...	23	47	.....	.....	
	Chiplún	65	34	28	71	.....	56 7 6	
	Saugameshvar	170	40	112	98	.....	.....	
	Málvan	218	12	201	29	.....	27 13 0	
Total, Cultural Operations...		2,394	189	610	1,973	71 10 6	3,747 13 7	
Grand Total ...		4,253	206	610	3,849	1,590 10 8	8,689 2 10	

In these charges is included the cost of burning fire-paths round the plantations, viz., Rs. 88-8-0.

Conservator's Office, S. C.,
dated Belgaum, the 18th October 1887.

J. L. L. MACGREGOR,
Conservator of Forests, S. C.

FORM No. 53.

FOREST DEPARTMENT, SOUTHERN CIRCLE.

Trees felled by Government Agency during the year 1886-87 (selection fellings).

Division.	TREES FELLED.		Remarks.
	Description.	Number.	
Northern Division, Kánara.	Teakwood	6,597	
	Blackwood	79	
	Junglewood	829	
	Casuarina	7,909	
	Total ...	15,414	
Central Division, Kánara.	Teakwood	5,448	
	Blackwood	2	
	Junglewood	16	
	Total ...	5,466	
Southern Division, Kánara.	Sandalwood	248	
Dhárwár	Teak	17,523	
	Junglewood	1,872	
	Sandalwood	391	
	Total ...	19,786	
Grand Total ...		40,914	

ABSTRACT OF THE CIRCLE.

Teak	29,568	
Blackwood	81	
Junglewood	2,717	
Sandalwood	639	
Casuarina	7,909	
Total ...	40,914	

J. L. L. MacGREGOR,
Conservator of Forests, S. C.

Dated Belgaum, the 18th October 1887.

FORM No. 54.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Outturn of Timber and Firewood during the year 1886-87.

Division.	Description of Materials.	OUTTURN IN CUBIC FEET.							Remarks	
		Selection Fellings.	Clearances.	Thinnings.	Total.	Removed by				
						Government Agency.	Purchasers.	Free Grants.		Right- holders.
Northern Division, Kánara.	Teakwood	2,04,312	...	...	2,04,312	2,04,312	...	...	...	
	Do. round pieces	16,656	...	...	16,656	16,656	...	...	...	
	Do. poles	2,300	...	937	3,237	3,237	...	...	...	
	Blackwood	2,249	...	...	2,249	2,249	...	...	...	
	Do. poles	...	396	...	396	396	...	...	...	
	Junglewood	1,69,048	...	...	1,69,048	27,450	1,10,974	30,624	...	
	Do. poles	2,925	...	...	2,925	...	2,925	...	...	
	Firewood	1,58,112	20,65,720	...	22,23,832	50,496	21,73,048	288	...	
	Charcoal	6,720	8,736	...	15,456	8,736	6,720	...	...	
	Total	5,62,322	20,74,852	937	26,38,111	3,18,532	22,93,667	30,912	...	
Central Division, Kánara.	Teakwood	4,811	1,841	...	6,652	6,551	101	...	...	
	Teak round pieces for sleepers	17,161	5,910	...	23,071	23,071	...	...	...	
	Do. pieces	...	...	1	1	1	...	...	...	
	Do. poles	...	11,222	...	11,222	11,222	...	...	...	
	Blackwood	1	222	...	223	3	220	...	...	
	Junglewood	37	5,276	...	5,313	191	3,637	1,485	...	
	Do. poles	...	...	1,628	1,628	8	1,015	605	...	
	Do. planks	...	...	9	9	...	9	...	...	
	Jiraiatwood pieces	...	...	643	643	643	...	...	...	
	Sandalwood	...	13	...	13	13	...	...	...	
	Bafni trees	...	7	...	7	...	7	...	...	
	Firewood stacks	...	...	1,787	1,787	1,785	2	...	...	
	Do. Tons	...	7,299	...	7,299	...	7,299	...	...	
	Do. Cart-loads	...	...	1,220	1,220	14	1,172	34	...	
	Do. Head-loads	...	...	81,800	81,800	45	81,230	525	...	
Karvi	...	...	6	6	...	6	...	...		
Charcoal	...	806	...	806	...	806	...	...		
Total	22,010	32,596	87,094	1,41,700	43,547	95,504	2,649	...		
Southern Division, Kánara.	Sandalwood	...	...	...	...	Kh. m. s. 6 12 2	...	...	...	
	Teakwood	...	...	...	...	934	41	...	...	
	Do. poles	...	...	...	...	483	...	...	...	
	Junglewood	...	...	...	...	619	7,928	2,366	...	
	Blackwood	...	...	...	...	...	2	...	...	
	Do. poles	...	...	...	...	...	25	297	...	
	Firewood...	...	...	...	...	...	3,744	...	...	
	Do. Head-loads.	...	...	...	...	...	56,575	...	...	
	Charcoal	...	...	...	...	...	284	...	...	
	Total	...	...	...	...	2,042 12 2	68,599	2,663	...	
Belgaum.	Teak trees for sleepers	1,969	...	...	1,969	2,708	...	...	...	
	Teakwood logs	...	...	2	2	...	...	...	...	
	Do. poles	...	1	1,292	1,293	...	1,293	...	...	
	Blackwood pieces	...	...	10	10	...	10	...	...	
	Junglewood poles	...	16,272	5,734	22,006	...	11,552	4,908	...	
	Do. pieces	...	...	103	103	...	103	...	...	
	Firewood stacks	...	12,307	...	12,307	...	11,189	...	...	
	Do. Bullock-loads.	...	...	429	429	...	429	...	...	
	Do. Cubic feet.	...	14,64,713½	...	14,64,713½	11,45,764½	...	...	...	
	Do. Cart-loads.	...	...	2,950	2,950	...	2,950	...	...	
	Do. Head-loads.	...	19,275	97,022	1,16,297	...	89,719	...	...	
	Cart-loads of trunks	...	54	...	54	...	54	...	...	
	1,040 maunds of charcoal equivalent to cart-loads	...	...	260	260	...	260	...	...	
	Thorns Head-loads.	...	...	171	171	...	171	...	...	
	Do. Cart-loads.	...	...	78	78	...	78	...	...	
	Karvi Do.	...	...	267	267	...	267	...	...	
	Toddy trees	...	...	88	88	...	88	...	...	
	Sandalwood trees	...	...	2	2	...	2	...	...	
	Do. pieces	...	...	2	2	...	2	...	...	
	Bábulwood	...	...	132	132	...	132	...	...	
Nim trees	...	...	3	3	...	3	...	...		
Total	1,969	15,12,622½	1,08,545	16,23,136½	11,48,472½	1,18,302	4,908	...		

FORM No. 54—continued.

Division.	Description of Materials.	OUTTURN IN CUBIC FEET.							Remarks.	
		ORANGS.	Clearances.	Thin- nings.	Total.	Removed by				
						Government Agency.	Purchasers.	Free Grants.		Right- holders.
Dharwar.	Teak rafters	14,847	185	...	15,032	14,847	368	38	...	
	Mutti do.	1,710	...	...	1,710	1,710	9	112	...	
	Jiraitwood	6,858	1,053	24,483	32,394	32,394	1,122	...	...	
	9' sleeper pieces	4,184	...	...	4,184	4,184	...	...	...	
	9' sleepers obtained	5,146	...	...	5,146	5,146	...	...	...	
	Slabs	7,031	...	...	7,031	7,031	...	...	...	
	Sandalwood billets	1,678	...	...	1,678	1,678	...	...	...	
	Do. roots	80	...	...	80	80	...	...	...	
	Firewood stacks	2,252	242	7,882	10,376	10,376	...	...	...	
	Do. ... Cart-loads. ...	...	327	...	327	...	327	...	...	
	Bambus	...	...	3,61,919	3,61,919	...	3,61,919	...	...	
	Do. pieces... ..	...	...	10,100	10,100	...	10,100	...	...	
	Dry bambus	...	...	1,400	1,400	...	1,400	...	...	
	Total ...	43,786	1,807	4,05,784	4,51,377	77,446	3,75,245	150	...	
Bijapur.	Sandalwood pieces	...	...	20	20	...	...	...	...	
	Babulwood ... Cart-loads. ...	...	...	598	598	...	...	...	...	
	Do. trees	...	...	21	21	...	...	...	...	
	Jambulwood ... Cart-loads. ...	...	...	100	100	...	...	...	...	
	Mango tree	...	...	1	1	...	...	...	...	
	Maswal rafters... Head-loads. ...	...	...	6,448	6,448	...	...	...	...	
	Do. implements of hus- bandry	...	...	13	13	...	...	...	...	
	Total ...	...	...	7,201	7,201	...	...	...	...	
Ratna- giri.	Teak poles and pieces	...	...	26,559	26,559	26,559	...	...	...	
	Casuarina poles	...	...	25	25	25	...	...	...	
	Firewood... .. Khandis. ...	...	...	1,076½	1,076½	1,076½	...	...	...	
	Total ...	...	...	27,660½	27,660½	27,660½	...	...	...	
Ko- laba.	Teak trees No. ...	...	1,25,559	...	1,25,559	9,500	1,25,559	...	...	
	Firewood Khandis. ...	...	55,000	...	55,000	...	55,000	...	...	
	Total ...	...	1,80,559	...	1,80,559	9,500	1,80,559	...	...	
	Grand Total ...	6,30,087	38,02,436½	6,37,221½	50,69,745	4,76,436	42,77,640	41,282	...	

Conservator's Office, S C.,
dated Belgaum, 18th October 1887. }

J. L. L. MACGREGOR.
Conservator of Forests.

FORM No. 55.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Outturn of Minor Produce for 1886-87.

Division.	Description of Produce.	PRODUCE REMOVED OR UTILIZED									
		By Government Agency.		By Purchasers.		By Free Grants.		By Right-holders.		Total.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs.		Rs. a. p.
Northern Division of Kanara.	Hirda	2,386	27,286 0 0	..	..	..	..	..	..	2,386	27,286 0 0
	Bambus	..	..	23,87,241	25,958 9 10	33,346	142 9 4	..	..	24,20,587	26,128 13 2
	Grazing fees	..	..	..	5,949 7 6	..	..	..	..	..	5,949 7 6
	Honey	..	..	..	1,012 0 0	..	..	..	..	..	1,012 0 0
	Shigekai	..	..	..	303 0 0	..	..	..	..	..	303 0 0
	Cinnamon	..	..	..	50 0 0	..	..	..	..	..	50 0 0
	Pepper	..	..	..	16 0 0	..	..	..	..	..	16 0 0
	Tapping fees on bairi trees	..	..	987 trees.	61 11 0	..	..	..	..	987 trees.	61 11 0
	Canes	..	..	52	13 0 0	..	..	..	..	52	13 0 0
	Creepers for baskets	..	..	1,643	17 1 0	..	..	..	..	1,643	17 1 0
	Fees on Medar bambus	..	..	..	26 4 0	..	..	..	..	..	26 4 0
	Goting	..	..	..	16 0 0	..	..	..	..	..	16 0 0
	Wild turmeric	..	..	..	31 0 0	..	..	..	..	..	31 0 0
	Nux vomica	..	..	..	19 0 0	..	..	..	..	..	19 0 0
	Fruit farm	..	..	..	10 13 3	..	..	..	..	..	10 12 3
	Bambu stakes	..	..	30	1 14 0	..	..	..	..	30	1 14 0
	Total	2,386	27,286 0 0	23,89,953	33,513 5 7	33,346	142 9 4	..	..	24,25,685	60,941 14 11
Central Division of Kanara.	Hirda	327	3,639 0 0	..	..	..	..	..	..	327	3,639 0 0
	Shigekai	9	124 0 0	..	..	..	..	..	..	9	124 0 0
	Grass pulles	43,712	150 0 0	..	..	..	..	..	..	43,712	150 0 0
	Bambus	2,557	20 4 0	..	..	..	..	..	..	2,557	20 4 0
	Do. Dowgi	..	..	1,08,074	2,330 0 0	1,550	15 0 0	..	..	1,09,624	2,345 0 0
	Do. Medar	..	..	2,17,590	3,439 0 0	1,450	7 0 0	..	..	2,19,040	3,446 0 0
	Shibs	..	..	4,54,900	3,967 0 0	8,650	21 4 0	..	..	4,63,550	3,993 4 0
	Grazing fees	..	..	..	6,408 0 0	..	..	..	..	..	6,408 0 0
	Bairi trees (tapping fees on)	..	..	41	3 0 0	..	..	..	..	41	3 0 0
	Honey farm	..	..	..	1,371 0 0	..	..	..	..	..	1,371 0 0
	Earth	..	..	61	4 0 0	..	..	..	..	61	4 0 0
	Bambus on contract	..	..	..	76 0 0	..	..	..	..	..	76 0 0
	Do.	..	..	208	52 0 0	..	..	..	..	208	52 0 0
	Canes	..	..	187	47 0 0	..	..	..	..	187	47 0 0
	Grass	..	..	..	7 0 0	..	..	..	..	..	7 0 0
	Nux vomica	..	..	..	6 0 0	..	..	..	..	..	6 0 0
	Catechu	..	..	..	4,000 0 0	..	..	..	..	..	4,000 0 0
	Hamfal, rampatri and cinnamon	..	..	..	1,195 0 0	..	..	..	..	..	1,195 0 0
	Pepper	..	..	..	355 0 0	..	..	..	..	..	355 0 0
	Total	46,605	3,933 4 0	7,81,061	23,260 0 0	11,650	43 4 0	..	..	8,39,516	27,236 8 0
Southern Division of Kanara.	Hirda	2,228	28,966 11 11	..	..	..	..	..	..	2,228	28,966 11 11
	Shigekai	19	241 12 10	..	..	..	..	..	..	19	241 12 10
	Bambus	..	..	64,375	679 14 0	2,250	22 8 0	..	..	66,625	702 6 0
	Do. (thin)	..	..	96,225	259 3 0	14,400	36 0 0	..	..	1,10,625	325 8 0
	Grazing fees	..	..	..	8,379 0 7	..	..	..	..	..	8,379 0 7
	Honey	..	..	..	1,063 7 8	..	..	..	..	..	1,063 7 8
	Palm trees	..	..	1,016	253 15 0	..	..	..	..	1,016	253 15 0
	Thorns	..	..	16	2 0 0	..	..	..	..	16	2 0 0
	Cane	..	..	431	107 12 0	..	..	..	..	431	107 12 0
	Confiscated timber, &c.	..	..	..	615 7 4	..	..	..	..	..	615 7 4
	Do. firewood	..	..	11	2 15 0	..	..	..	..	11	2 15 0
	Do. do. Head-loads	..	..	106	6 7 6	..	..	..	..	106	6 7 6
	Do. bambus	..	..	330	2 13 7	..	..	..	..	330	2 13 7
	Cinnamon farm	..	..	..	75 0 0	..	..	..	..	..	75 0 0
	Stones, &c., quarry fees	..	..	C-loads 484	38 3 6	..	..	..	..	484	38 3 6
	Shigekai bark	..	..	..	136 10 6	..	..	..	..	..	136 10 6
	Wild pepper	..	..	..	44 0 0	..	..	..	..	..	44 0 0
	Aleksistoo	..	..	..	15 9 6	..	..	..	..	..	15 9 6
Dharwar.	Confiscated cane	..	..	..	0 8 0	..	..	..	..	..	0 8 0
	Do. shigekai bark, hadchari and heart of palm	..	..	72	0 9 6	..	..	..	..	72	0 9 6
	Confiscated firewood and poles	..	..	..	27 12 0	..	..	..	..	..	27 12 0
	Total	2,247	29,208 8 9	1,63,161	11,745 9 8	16,650	58 8 0	..	..	1,82,058	41,012 10 5
	Hirda	147	208 8 0	..	12 0 0	..	..	..	..	147	220 8 0
	Grass pulles	1,325	2 13 0	13,750	13 2 0	..	..	..	..	15,075	15 15 0
	Thorns	..	..	1,330	176 10 6	..	..	..	..	1,330	176 10 6
	Toddy tree branches	..	..	466	35 3 6	..	..	..	..	466	35 3 6
	Tapping fees on toddy trees	..	..	trees 1,002	62 10 0	..	..	..	..	1,002	62 10 0
	Royalty on tairvad bark	..	..	..	400 0 0	..	..	..	..	..	400 0 0
	Do. babul pods	..	..	..	125 0 0	..	..	..	..	..	125 0 0
	Do. vanadungi fruits	..	..	..	24 4 0	..	..	..	..	..	24 4 0
	Do. honey	..	..	..	162 8 9	..	..	..	..	..	162 8 9
	Mangoes	..	..	..	16 15 6	..	..	..	..	..	16 15 6
	Tamarinds	..	..	..	10 15 6	..	..	..	..	..	10 15 6
	Karanj	..	..	..	25 0 0	..	..	..	..	..	25 0 0
	Jujubs	..	..	..	2 0 0	..	..	..	..	..	2 0 0
Belgaum.	Marking nuts	..	..	..	29 3 0	..	..	..	..	..	29 3 0
	Creepers for baskets	..	..	..	9 0 0	..	..	..	..	..	9 0 0
	Gum of several trees	..	..	..	19 4 0	..	..	..	..	..	19 4 0
	Stones	..	..	4,111	266 8 0	..	..	..	..	4,111	266 8 0
	Earth and kunpur	..	..	327	19 11 0	..	..	..	..	327	19 11 0
	Manure	..	..	..	3 4 0	..	..	..	..	..	3 4 0
	Total	1,472	211 5 0	20,966	1,412 14 9	..	..	..	..	22,468	1,624 3 9
	Hirda	6,221	40,199 0 0	..	..	..	..	..	..	6,221	40,199 0 0
	Tapping toddy trees	..	..	91	5 11 0	..	..	..	..	91	5 11 0
	Bambus (large)	..	..	25,048	752 2 7	310	3 2 0	..	..	25,358	755 4 7
	Medar bambus	..	..	53,675	1,073 8 0	..	..	..	..	53,675	1,073 8 0
	Shibs	..	..	2,63,576	2,638 1 0	2,600	6 8 0	..	..	2,64,176	2,644 9 0
	Chives	..	..	63,950	319 12 0	..	..	..	..	63,950	319 12 0
	Canes	..	..	234	14 10 0	..	..	..	..	234	14 10 0
	Sand	..	..	32,593	20 5 11	..	..	..	..	32,593	20 5 11
	Stones	..	..	5,605	350 5 0	..	..	..	..	5,605	350 5 0
	Do.	..	..	2,87,718	1,071 0 11	..	..	..	..	2,87,718	1,071 0 11
	Do. Bullock-loads	..	..	820	12 13 0	..	..	..	..	820	12 13 0

FORM No. 55—continued.

Division.	Description of Produce.	PRODUCE REMOVED OR UTILIZED.									
		By Government Agency.		By Purchasers.		By Free Grants.		By Right-holders.		Total.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs.		Rs. a. p.
Belgaum—continued.	Earth Cart-loads	..	..	105	1 10 3	..	..	..	..	105	1 10 3
	Sale of shigékái	..	..	..	777 0 0	..	..	..	..	..	777 0 0
	Honey	..	..	..	384 0 0	..	..	..	..	..	384 0 0
	Mangoes	..	..	..	4 4 6	..	..	..	..	..	4 4 6
	Coffee	..	..	..	0 13 6	..	..	..	..	..	0 13 6
	Grazing fees	..	..	..	16,686 4 6	..	..	..	..	..	16,686 4 6
	Sale of grass	..	..	..	26 1 6	..	..	..	..	..	26 1 6
	Sale of kurans	..	..	..	4,087 1 8	..	..	..	..	..	4,087 1 8
	Gum (kapilpith) .. Maunds	..	..	35	49 0 0	..	..	..	..	35	49 0 0
	Tamarinde Maunds	..	..	10	0 12 0	..	..	..	..	10	0 12 0
	Tarvád bark Bullock-loads	..	..	148	13 14 0	..	..	..	..	148	13 14 0
	Minor produce	..	..	..	448 6 8	..	..	..	..	..	448 6 8
	Total ..	6,221½	40,199 0 0	7,33,608	28,687 10 0	2,910	9 10 0	..	..	7,42,739½	68,806 4 0
Bijapur.	Large stones Cart-loads	..	..	448	61 0 0	..	..	..	..	448	61 0 0
	Small do. do.	..	..	16,597	1,037 5 0	..	..	..	..	16,597	1,037 5 0
	Do. do. Bullock-loads	..	..	982	15 5 6	..	..	..	..	982	15 5 6
	Do. do. Donkey-loads	..	..	12	0 2 0	..	..	..	..	12	0 2 0
	Do. do. Head-loads	..	..	3,686	19 3 2	..	..	..	..	3,686	19 3 2
	Do. do. Cubic feet	..	..	3,69,011	1,153 2 6	..	..	..	..	3,69,011	1,153 2 6
	Small stones	..	..	..	332 0 0	..	..	..	..	..	332 0 0
	Earth Cart-loads	..	..	349	21 13 0	..	..	..	..	349	21 13 0
	Do. Bullock-loads	..	..	2,713	42 6 3	..	..	..	..	2,713	42 6 3
	Do. Donkey-loads	..	..	3,665	38 2 10	..	..	..	..	3,665	38 2 10
	Do. Head-loads	..	..	756	3 15 0	..	..	..	..	756	3 15 0
	Grinding stones	..	..	..	31 0 0	..	..	..	..	..	31 0 0
	Tumri leaves Head-loads	..	..	522	32 10 0	..	..	..	..	522	32 10 0
	Do. Bullock-loads	..	..	22	2 12 0	..	..	..	..	22	2 12 0
	Bundergi leaves do.	..	..	49	6 2 0	..	..	..	..	49	6 2 0
	Do. do. Head-loads	..	..	5,866	374 12 0	..	..	..	..	5,866	374 12 0
	Hulagali Cart-loads	..	..	1,376	397 0 0	..	..	..	..	1,376	397 0 0
	Do. Head-loads	..	..	411	25 11 0	..	..	..	..	411	25 11 0
	Red earth Cart-loads	..	..	178	27 15 6	..	..	..	..	178	27 15 6
	Do. Bullock-loads	..	..	1,885	58 14 6	..	..	..	..	1,885	58 14 6
	Do. Donkey-loads	..	..	2	0 2 0	..	..	..	..	2	0 2 0
	Do. Head-loads	..	..	844	13 3 0	..	..	..	..	844	13 3 0
	Yellow earth Donkey-loads	..	..	68	2 2 0	..	..	..	..	68	2 2 0
Koldba. Ratnagiri.	Bábul pods	..	..	..	324 14 0	..	..	..	..	..	324 14 0
	Gum	..	..	..	56 2 0	..	..	..	..	..	56 2 0
	Honey	..	..	..	16 4 0	..	..	..	..	..	16 4 0
	Mangoes	..	..	..	13 10 0	..	..	..	..	..	13 10 0
	Tamarind	..	..	..	9 8 0	..	..	..	..	..	9 8 0
	Tarvád bark	..	..	..	85 8 6	..	..	..	..	..	85 8 6
	Shindi trees	..	..	..	25 0 0	..	..	..	..	..	25 0 0
	Total ..	..	..	4,09,442	4,177 9 9	..	..	..	..	4,09,442	4,177 9 9
	Hirda	K. m. 4 11	58 0 0	..	..	..	..	..	..	K. m. 4 11	58 0 0
	Hirda, shigékái	..	..	..	1,250 0 0	..	..	..	..	..	1,250 0 0
	Apta and temburni leaves	..	..	..	..	..	..	..	..	..	..
	Grand Total ..	..	1,00,896 1 9	..	1,04,047 1 9	..	253 15 4	..	..	..	2,05,197 2 1

Conservator's Office, S. C.,
dated Belgaum, the 18th October 1887. }

J. L. L. MacGREGOR,
Conservator of Forests, S. C.

FORM No. 56.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Account of Timber and other Produce cut or collected by Government Agency and brought to Sale Depôts or sold locally during the year 1886-87.

Particulars.	Number or Quantity.	Khandis.	TOTAL OF EACH HEAD.		Particulars.	Number or Quantity.	Khandis.	TOTAL OF EACH HEAD.	
			Number or Quantity.	Khandis.				Number or Quantity.	Khandis.
TIMBER.					TIMBER.				
BALANCE AT COMMENCEMENT OF THE YEAR.					REMOVED BY PURCHASERS FROM DEPÔTS.				
Northern Division of Kânara.									
Teakwood...	617	832			Teakwood ...	7,034	13,194		
Teak round pieces	11,422				Do. poles ...	16,095			
Do. sleepers	5,297				Do. round pieces	2,722			
Do. slabs	19,353				Do. rafters ...	16,032			
Blackwood	202	340			Do. ... Cubic feet	26,700			
Junglewood	17	38	36,908	1,210	Blackwood ...	318	479		
Central Division of Kânara.					Do. ... Cubic feet	15			
Teak logs	1,023	1,426			Do. poles	28			
Teak round pieces for sleepers	23,316				Jiraitwood	20,309			
Do. pieces ... Cubic feet	60				Junglewood	1,016	1,525		
Do. sleepers	5,071				Do. ... Cubic feet	152			
Teakwood ... Cubic feet	20,890				Do. poles	11,073			
Blackwood	67	74			Sandalwood pieces ...	12			
Do. ... Cubic feet	24				Do. pieces	178	4-14-8		
Junglewood	905	1,036			Do. ... Khandis		13-0-0		
Do. ... Cubic feet	13,202				Mutti rafters	2,266			
Brakes for traffic carts	170				Teak sleepers	1,26,264			
Sitting boards	92				Do. rejected	1,788			
			64,820	2,536	Teak slabs	75,032			
Southern Division of Kânara.					Do. planks	3			
Teakwood...	168	228			Do. railings	24			
Do. poles	872				End pieces and poles	2,728			
Do. round pieces for sleepers	460				Sitting boards	6			
Do. sleepers	1,127							3,09,795	15,215-14-8
Do. rejected do.	226				SOLD LOCALLY.				
Slabs	62,296				Teak logs	1	1		
Sandalwood chips...Carts	12	2			Do. rafters	185			
Blackwood	2	2			Jiraitwood	1,381			
Junglewood	889	1,235	66,052	1,465	Junglewood	293	38		
Belgaum Division.					Do. poles	399			
Teak trees for sleepers	1,340				Sotás	1,766			
Do. round pieces	3,718				Poles, 1st class	4,874			
Do. sleepers	15,308				Do. 2nd do.	7,741			
Junglewood poles	618				Do. 3rd do.	10,779			
			20,984*	.....	Do. 4th do.	7,014			
Dhârwâr Division.					Miscellaneous pieces	8,418			
Teak rafters	12,495				Beams	744			
Mutti do.	1,500				Casuarina poles	25			
Miscellaneous rafters	129				Junglewood props...	75			
Jiraitwood	29,935				Yokes for carts	3			
			44,059	.....	Jiraitwood ... Cart-loads	7			
Kolâba Division.					CONVERTED IN DEPÔTS.				
Teak poles, 1st class	35				Teak trees	2,708			
Do. 2nd do.	114				Do. round pieces	59,190			
Do. 3rd do.	68				Do. logs	2,274	4,544		
Do. 4th do.	29				Junglewood	8	24		
Miscellaneous poles	1,621							64,180	4,568
			1,867	.....	LOST OR WRITTEN OFF AS USELESS.				
Total Balance	...	...	2,34,690	5,211	Teak sleepers	1,910			
RECEIVED FROM THE FORESTS IN DEPÔTS.					Do. slabs	2,520			
Teak logs	11,904	23,830			Blackwood logs	1	1		
Do. trees	1,869							4,431	
Do. poles	17,263				USED BY THE DEPARTMENT.				
Do. round pieces	37,456				Slabs	25			
Do. rafters	14,641				Teak logs	1	6		
Blackwood	133	183			Teakwood ...Cubic feet	277			
Do. poles	28				Junglewood... Do.	214			
Jiraitwood	24,135				Miscellaneous pieces	36			
Junglewood	1,802	3,032			feet	163			
Do. poles	16,743				Brakes for traffic carts	...			
Mutti rafters	1,925							716	
Sandalwood	611	19-4-8			TRANSFERRED TO OTHER SALE DEPÔTS.				
Do. saw-dust bags	5				Teak logs	120	139		
Teak sleepers	10,478				Sleepers	14			
Do. rejected sleepers	123				Teak round pieces	3,803			
Do. slabs	905				Teak rafters	14,803			
			1,40,021	27,064-4-8	Teak poles	243			
					Mutti rafters	1,710			
					Jiraitwood	27,798			
					Blackwood	16	19		
					Miscellaneous pieces	57			
					feet	...			
								48,564	158

Particulars	Number or Quantity.	Khandis.	TOTAL OF EACH HEAD.		Particulars.	Number or Quantity.	Khandis.	TOTAL OF EACH HEAD.	
			Number or Quantity.	Khandis.				Number or Quantity.	Khandis.
TIMBER—continued.					TIMBER—continued.				
BALANCE AT CLOSE OF THE YEAR.					BALANCE AT CLOSE OF THE YEAR.				
Northern Division of Kánara.					Northern Division of Kánara.				
Teakwood ...	3,253	7,852			Teakwood ...	3,253	7,852		
Do. posts ...	5	5			Do. posts ...	5	5		
Do. round pieces ...	2,798				Do. round pieces ...	2,798			
Do. sleepers ...	961				Do. sleepers ...	961			
Do. slabs ...	19,973				Do. slabs ...	19,973			
Junglewood ...	733	1,367			Junglewood ...	733	1,367		
Blackwood ...	32	62			Blackwood ...	32	62		
			43,705	39				27,757	
Central Division of Kánara.					Central Division of Kánara.				
Teak logs ...	901	1,086			Teak logs ...	901	1,086		
Do. round pieces for sleepers ...	16,014				Do. round pieces for sleepers ...	16,014			
Do. sleepers ...	3,056				Do. sleepers ...	3,056			
Do. slabs ...	26,912				Do. slabs ...	26,912			
Do. poles ...	59				Do. poles ...	59			
Do. ... Cubic feet	17,936				Do. ... Cubic feet	17,936			
Blackwood logs ...	51	55			Blackwood logs ...	51	55		
Do. ... Cubic feet	9				Do. ... Cubic feet	9			
Junglewood logs ...	919	1,103			Junglewood logs ...	919	1,103		
Do. ... Cubic feet	13,071				Do. ... Cubic feet	13,071			
Brakes for traffic carts ...	7				Brakes for traffic carts ...	7			
Sitting boards ...	88				Sitting boards ...	88			
Miscellaneous pieces Cubic feet	50				Miscellaneous pieces Cubic feet	50			
			2,44,410	888				79,073	
Southern Division of Kánara.					Southern Division of Kánara.				
Teak ...	315	517			Teak ...	315	517		
Blackwood ...	2	2			Blackwood ...	2	2		
Junglewood ...	935	1,322			Junglewood ...	935	1,322		
Teak poles ...	1,981				Teak poles ...	1,981			
Junglewood poles ...	42				Junglewood poles ...	42			
Teak round pieces for sleepers ...	821				Teak round pieces for sleepers ...	821			
Do. sleepers ...	638				Do. sleepers ...	638			
Do. slabs ...	59,997				Do. slabs ...	59,997			
Sandalwood billets ...	433	1-10			Sandalwood billets ...	433	1-10		
Do. saw-dust bags ...	5				Do. saw-dust bags ...	5			
			48,564	158				65,169	1,842
Belgaum Division.					Belgaum Division.				
Teak trees for sleepers ...	501				Teak trees for sleepers ...	501			
Do. round pieces ...	183				Do. round pieces ...	183			
Junglewood poles ...	6,158				Junglewood poles ...	6,158			
Sleepers ...	738				Sleepers ...	738			
Slabs ...	1,589				Slabs ...	1,589			
								9,169	
Dhárwār Division.					Dhárwār Division.				
Teak rafters ...	11,104				Teak rafters ...	11,104			
Mutti do. ...	1,159				Mutti do. ...	1,159			
Jiraitwood ...	33,761				Jiraitwood ...	33,761			
Slabs ...	175				Slabs ...	175			
Miscellaneous rafters ...	129				Miscellaneous rafters ...	129			
								46,323	
Kolába Division.					Kolába Division.				
Beams ...	19				Beams ...	19			
Teak pieces ...	119				Teak pieces ...	119			
Poles, 1st class ...	400				Poles, 1st class ...	400			
Do. 2nd do. ...	495				Do. 2nd do. ...	495			
Do. 3rd do. ...	540				Do. 3rd do. ...	540			
Do. 4th do. ...	418				Do. 4th do. ...	418			
Miscellaneous poles ...	447				Miscellaneous poles ...	447			
								2,438	
Ratnágiri Division.					Ratnágiri Division.				
Teak sotás ...	726				Teak sotás ...	726			
Do. poles, 1st class ...	915				Do. poles, 1st class ...	915			
Do. 2nd do. ...	1,597				Do. 2nd do. ...	1,597			
Do. 3rd do. ...	3,136				Do. 3rd do. ...	3,136			
Do. 4th do. ...	2,329				Do. 4th do. ...	2,329			
Casuarina poles ...	25				Casuarina poles ...	25			
Miscellaneous pieces ...	1,337				Miscellaneous pieces ...	1,337			
								10,065	
Total Timber ...					Total Timber ...				
			7,11,300	33,360-4-8				7,11,390	33,504-4-8

FORM No. 56—continued.

Particulars.	Number or Quantity.	Khandis.	TOTAL OF EACH HEAD.		Particulars.	Number or Quantity.	Khandis.	TOTAL OF EACH HEAD.	
			Number or Quantity.	Khandis.				Number or Quantity.	Khandis.
FIREWOOD.					FIREWOOD.				
BALANCE AT COMMENCEMENT OF THE YEAR.					REMOVED BY PURCHASERS.				
Dhárwár Division.					Firewood stacks 18,307 ...				
Firewood stacks 3,054 ...					Do. ... Head-loads 19,275 ...				
Belgaum Division.					Do. ... Khandis ... 543				
Firewood stacks 10,065 ...					Do. ... Cubic feet ... 11,45,764½				
Do. ... Cubic feet ... 77,140					Firewood stacks burnt by forest fire 113 ...				
Bijápur Division.					BALANCE AT CLOSE OF THE YEAR.				
Firewood ... Maunds 1,000 ...					Dhárwár Division.				
Total Balance 14,119 77,140					Firewood stacks 3,199 ...				
Received from the Forest.					Belgaum Division.				
Firewood stacks 19,683 ...					Firewood stacks 11,183 ...				
Do. ... Head-loads 19,275 ...					Do. ... Cubic feet ... 3,96,089				
Do. ... Khandis ... 1,076½					Bijápur Division.				
Do. ... Cubic feet ... 14,64,713½					Firewood ... Maunds 1,000 ...				
Total Firewood 53,077 15,42,930					Ratnágiri Division.				
OTHER MINOR PRODUCE.					Firewood ... Khandis ... 533½				
BALANCE AT COMMENCEMENT OF THE YEAR.					Total Firewood 53,077 15,42,930				
Central Division of Kánara.					OTHER MINOR PRODUCE.				
Shigekái K. m. 7 5					REMOVED BY PURCHASERS.				
Grass ... Bundles 2,14,197 ...					Hirda ... Khandis ... 9,370 15				
Northern Division of Kánara.					Shigekái 840				
Hirda ... Khándis ... 677					Grass ... Bundles 37,661 ...				
Southern Division of Kánara.					BALANCE AT CLOSE OF THE YEAR.				
Hirda .. Khandis ... 566 9					Northern Division of Kánara.				
Shigekái 0 5½					Hirda ... Khandis ... 540				
Belgaum Division.					Central Division of Kánara.				
Hirda ... Khandis ... 377					Hirda K. m. 0 6½				
Total Balance 2,14,197 1,627 19½					Shigekái 1 16				
Received from the Forests.					Grass ... Bundles 1,76,536 ...				
Hirda ... Khandis ... 9,427					Southern Division of Kánara.				
Shigekái 872					Hirda ... Khandis ... 441 2				
Total Other Minor Produce 2,14,197 11,926 19½					Shigekái 39 0				
					Belgaum Division.				
					Hirda ... Khandis ... 694 0				
					Total Other Minor Produce. 2,14,197 11,926 19½				

* The opening balance of 20,984 now given under Belgaum under the head "Timber" ought to have been shown under the same division as closing balance in the statement for 1883-86, but it could not be done so, owing to a mistake in the Divisional Officer's statement for 1885-86.

J. L. L. MacGREGOR,
Conservator of Forests, S. C.

Dated Belgaum, the 18th October 1887.

FORM No. 57.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Abstract showing the Value of Timber and other Produce at Sale-Depôts for the year 1886-87.

Description of Timber and other Produce.	ON HAND AT COMMENCEMENT OF THE YEAR.			ON HAND AT CLOSE OF THE YEAR.			DIFFERENCE IN VALUE.		Remarks.
	No.	Khandis.	Value.	No.	Khandis.	Value.	In favour of the year.	Against the year.	
<i>Northern Division of Kánara.</i>			Rs.			Rs.	Rs.	Rs.	
TIMBER.									
Teakwood	617	832	10,755	3,253	7,852	1,17,780	1,07,025	...	
Blackwood	202	340	3,366	32	62	682	...	2,684	
Junglewood	17	38	385	653	1,341	13,410	13,025	.....	
Teak round pieces...	11,422	...	35,000	1,049	...	3,147	...	31,853	
Teak sleepers	5,297	...	11,000	961	...	1,922	...	9,078	
Teak slabs	19,353	...	2,000	19,973	...	2,000	...	.....	
Total	...	...	62,506	...	...	1,38,941	1,20,050	43,615	
<i>Central Division of Kánara.</i>									
Logs	1,995	2,536	24,204	1,871	2,244	22,755	...	1,449	
Teak round pieces for sleepers	23,316	...	1,16,580	16,014	...	80,070	...	36,510	
Teak sleepers	5,071	...	9,411	3,056	...	7,294	...	2,117	
Teak slabs	...	...	...	26,912	...	6,791	6,791	.....	
Teak poles	...	...	...	59	...	177	177	.....	
Brakes for traffic carts ...	170	...	5	7	...	0-3-0	...	4-13	
Sitting boards	92	...	12	88	...	12-0-0	...	.....	
Miscellaneous scantlings									
Cubic feet	...	34,176	68,350	...	31,066	62,132	...	6,218	
Total	...	...	2,18,562	...	...	1,79,231-3-0	6,968	46,298-13-0	
<i>Southern Division of Kánara.</i>									
Teak	168	228	3,954	315	517	9,047	5,093	.....	
Blackwood	2	2	19	2	2	19	...	.....	
Sandalwood	12 carts	...	25	433 bil-	1-10-0	210	185	.....	
	chips.			lets and					
				5 bags.					
Junglewood	889	1,235	12,350	935	1,322	14,531	2,181	.....	
Teak poles	872	...	2,046	1,981	...	3,160	1,114	.....	
Junglewood poles	...	...	...	42	...	38	38	.....	
Round pieces for sleepers	460	...	...	821	...	.....	...	.....	
Sleepers	1,127	...	2,254	638	...	1,276	...	978	
Rejected sleepers	226	...	227	...	...	.....	...	227	
Slabs	62,296	...	6,221	59,997	...	5,999	...	222	
Total	...	...	27,096	...	...	34,280	8,611	1,427	
<i>Belgaum Division.</i>									
Teak trees for sleepers ...	1,340	...	16,000	501	...	2,004	...	13,996	
Do. round pieces	3,718	...	6,300	183	...	366	...	5,934	
Do. sleepers	15,308	...	35,000	738	...	1,476	...	33,524	
Poles	618	...	150	...	...	.....	...	150	
Junglewood poles	...	...	...	6,158	...	400	400	.....	
Slabs	...	...	...	1,589	...	180	180	.....	
Total	...	...	57,450	...	...	4,426	580	53,604	
<i>Dhárwad Division.</i>									
Teak rafters	12,495	...	...	11,104	...	...	...	...	
Mutta do.	1,500	...	21,150	1,150	...	18,550	...	2,600	
Miscellaneous rafters ...	129	...	...	129	...	...	...	...	
Jirani wood	29,935	...	7,483	33,761	...	8,440	957	.....	
Slabs	...	...	...	175	...	25	25	.....	
Total	...	...	28,633	...	...	27,015	982	2,600	

Value not known.

FORM No. 57—continued.

Description of Timber and other Produce.	ON HAND AT COMMENCEMENT OF THE YEAR			ON HAND AT CLOSE OF THE YEAR.			DIFFERENCE IN VALUE.		Remarks.
	No.	Khandis.	Value.	No.	Khandis.	Value.	In favour of the year.	Against the year.	
			Rs.			Rs.	Rs.	Rs.	
<i>Kolaba Division.</i>			TIMBER—continued.						
Teak poles, 1st class ...	35	}	705	2,438	...	1,200	495	.....	
Do. 2nd do. ...	114								
Do. 3rd do. ...	68								
Do. 4th do. ...	29								
Miscellaneous poles ...	1,621								
<i>Ratnágiri Division.</i>									
Teak poles and pieces ...	...	...	...	10,040	...	1,525	1,525	.....	
Firewood ...	...	...	...	...	533½				
Casuarina poles ...	...	...	...	25	...				
Total ...	...	...	...	...	...	1,527	1,527	.....	
Total Timber ...	...	...	3,94,952	...	...	3,86,620-3-0	1,39,213	1,47,544 13-0	
<i>Central Division of Kánara.</i>			FIREWOOD.						
Firewood stacks ...	...	...	...	455	...	341	341	.....	
<i>Belgaum Division.</i>									
Firewood stacks ...	10,065	...	6,000	11,183	...	11,183	5,183	.....	
Do. Cubic feet ...	77,140	...	4,600	...	3,98,089	23,760	19,160	.....	
Total ...	...	...	10,600	...	...	34,943	24,343	.....	
<i>Dhárwár Division.</i>									
Firewood stacks ...	3,054	...	3,054	3,199	...	3,199	145	.....	
<i>Bijápúr Division.</i>									
Firewood ... Maunds ...	1,000	...	250	1,000	...	250	...	.....	
Total Firewood ...	...	...	13,904	...	...	38,733	24,829	.....	
<i>Northern Division of Kánara.</i>			OTHER MINOR PRODUCE.						
Hirda ...	...	677	8,683	...	540	5,400	...	3,283	
<i>Central Division of Kánara.</i>									
Hirda ...	...	...	...	...	06½	3	3	.....	
Shigékái ...	...	7-5	115	...	1-16	20	...	95	
Grass ... Bundles	2,14,197	...	736	1,76,536	...	607	...	129	
Total ...	...	...	851	...	...	630	3	224	
<i>Southern Division of Kánara.</i>									
Hirda ...	...	566-9	8,352	...	441-2-0	4,317	...	4,035	
Shigékái ...	...	5½	3	...	39-0-0	471	468	.....	
Total ...	...	...	8,355	...	...	4,788	468	4,035	
<i>Belgaum Division.</i>									
Hirda ...	...	377	4,643	...	694	4,443	...	200	
Total Minor Produce ...	...	...	22,532	...	...	15,261	471	7,742	
Grand Total ...	...	...	4,31,388	...	...	4,40,614-3-0	1,64,513	1,55,286-13-0	

Net difference in favour of the year—Rs. 9,226-3-0.

Conservator's Office, S. C.,
dated Belgaum, the 18th October 1887. }

J. L. L. MacGREGOR,
Conservator of Forests, S. C.

FORM No. 58.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Summary of Revenue and Expenditure of the different Divisions during the year 1886-87.

Budget Heads.	Direction.	Belgaum Division.	Bijapur Division.	Dhárwar Division.	Northern Division, Kánara.	Central Division, Kánara.	Southern Division, Kánara.	Koláha Division.	Ratnágiri Division.	Total.
REVENUE.										
I.—Timber and other Produce removed from the Forests by Government Agency.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
a. Timber		91,233 3 3	....	81,880 0 6	3,27,253 11 10	2,59,574 6 8	44,162 14 6	8,784 3 4	4,559 12 0	8,17,448 3 8
b. Firewood and charcoal		89,486 8 6	....	7,317 14 0	3,046 5 11	999 10 0	....	459 7 3	51 0 0	1,01,360 13 8
c. Bambus		6 12 0	2 9 0	....	144 7 0	4 3 0	....	....	....	138 4 0
d. Sandalwood		2 3 0	180 1 0	1,802 7 0	....	1,315 2 3	474 13 10	....	....	3,834 11 1
e. Grass and other minor produce		34,198 12 1	....	211 5 0	27,286 10 0	1,565 14 5	31,367 13 3	4 4 9	58 0 0	94,692 11 6
II.—Timber and other Produce removed from the Forests by Consumers or Purchasers.										
a. Timber		7,399 7 2	1,410 4 6	304 9 6	23,819 12 3	11,555 0 2	21,744 11 4	1,07,270 10 6	94 14 5	1,73,610 5 10
b. Firewood and charcoal		5,507 0 0	11,471 6 3	541 2 8	26,300 13 7	13,114 4 9	2,152 15 0	33,715 2 4	27 4 1	92,589 0 8
c. Bambus		4,793 3 7	1 3 2	4,721 10 6	26,020 5 10	9,886 2 2	970 14 0	....	....	40,333 7 3
d. Grazing and fodder grass		16,856 7 1	4,654 3 0	15,428 7 10	5,949 7 6	6,408 3 9	8,379 0 7	1,362 12 3	284 9 7	59,323 3 7
e. Other minor produce		3,123 10 6	4,601 13 9	1,397 2 9	1,559 9 1	7,192 9 0	1,740 10 2	1,474 7 1	21 5 9	21,111 4 1
III.—Confiscated, Drift and Waif Wood		42 7 6	29 1 9	30 9 1	5,060 1 0	93 11 4	636 2 1	1,622 10 3	78 15 10	7,593 10 10
IV.—Revenue from Forests not managed by Government.										
a. Duty on foreign timber and other forest produce									99 9 8	99 9 8
b. Revenue from shared and private forests								19 15 10	96 14 2	107 14 0
V.—Miscellaneous.										
a. Fines and forfeitures		54 11 6	308 3 3	2 13 1	85 0 1	1,067 8 9	40 14 0	3,145 12 9	74 7 1	4,779 6 6
b. Refunds		4,011 11 9	5 0 0	....	8 6 7	308 10 8	118 2 3	179 10 10	....	4,631 10 1
c. Other sources		1,711 6 5	44 8 10	555 2 2	1,067 9 1	1,445 8 8	393 9 8	586 10 9	13 11 10	5,818 3 5
Total Revenue		2,58,427 8 4	22,717 6 6	1,14,255 4 1	4,47,602 3 9	8,14,531 4 2	1,12,182 8 8	1,58,616 11 11	5,460 8 5	14,38,763 7 10
EXPENDITURE.										
A.—CONSERVANCY AND WORKS.										
I.—Timber and other Produce removed from the Forests by Government Agency.										
a. Timber		5,608 5 9	....	25,260 1 5	1,38,604 2 8	1,01,906 8 11	12,438 3 9	1,490 10 1	2,059 4 9	2,57,367 5 4
b. Firewood and charcoal		40,023 3 10	152 8 0	2,214 2 8	2,979 11 3	138 2 0	....	47 9 10	....	45,555 5 2
c. Bambus				51 11 9	....	3 6 5	....	....	....	55 2 2
d. Sandalwood		28 7 6	....	268 13 2	....	205 0 10	162 5 3	....	....	664 10 9
e. Grass and other minor produce		23,950 3 7	10 9 0	3 10 0	15,485 10 10	3,541 4 0	13,853 7 10	....	44 9 9	56,889 7 0
II.—Timber and other Produce removed from the Forests by Consumers or Purchasers		1,240 15 6	64 0 0	1,637 4 3	287 3 9	122 11 6	506 12 0	1,218 1 8	....	5,077 0 8
III.—Confiscated, Drift and Waif Wood		10 13 3	....	0 8 0	27 3 5	24 11 5	22 9 5	138 11 7	....	224 9 1
IV.—Revenue from Forests not managed by Government—										
a. Duty on foreign timber and other forest produce										
b. Revenue from shared and private forests										
V.—Rent of Leased Forests and Payments to Shareholders in Forests managed by Government .. .. .		....	....	....	....	....	....	16,419 4 9	....	16,419 4 9
VI.—Live Stock, Stores, Tools and Plant—										
a. Purchase of cattle										
b. Feed and keep of cattle					172 6 9	945 11 11	....	47 8 0	....	1,165 10 8
c. Stores, tools and plant		23 3 0	2 10 6	23 4 0	8 2 0	211 1 2	2 1 0	136 4 0	2 5 0	408 14 8
VII.—Communications and Buildings—										
a. Roads and bridges		329 2 0	....	....	249 7 3	465 5 5	321 4 7	....	29 4 9	1,394 8 0
b. Buildings		555 14 11	....	832 8 9	849 2 0	1,378 9 10	900 0 0	54 12 9	....	4,571 0 3
c. Other works		77 11 3	....	59 13 5	22 8 0	283 1 6	137 9 0	3 0 0	3 2 9	686 13 11
VIII.—Demarcation, Improvement and Extension of Forests.										
a. Demarcation		214 13 4	1,724 13 9	....	....	4,524 0 9	354 0 6	7,268 4 1	2,113 2 7	16,199 3 0
b. Compensation for land and rights				14 0 0	....	....	....	....	....	945 8 0
c. Surveys and working plans		831 8 0	....	58 1 6	762 4 3	114 0 9	3,104 13 7	134 13 0	112 5 0	5,501 2 1
d. Plantations		88 11 0	1,146 1 0	234 3 6	335 12 6	45 12 0	....	5 9 0	....	870 4 6
e. Protection from fire		105 9 0	....	....	....	....	....	1 8 0	....	1 8 0
f. Other works										
IX.—Miscellaneous.										
a. Refunds										
b. Law charges		8 0 0	....	....	....	....	....	47 7 0	....	55 7 0
c. Other charges			16 8 0	55 8 0	....	0 10 0	56 13 7	452 7 2	....	581 15 3
Total, A.—Conservancy and Works.		73,196 9 11	3,270 8 9	30,631 14 9	1,59,895 6 5	1,13,910 2 5	31,997 7 6	27,418 7 11	4,364 2 7	4,44,534 12 3

FORM No. 58—continued.

Budget Heads.	Direction	Belgaum Division.	Bijapur Division.	Dhárwār Division.	Northern Division, Kánara.	Central Division, Kánara.	Southern Division, Kánara.	Kolába Division.	Ratnágiri Division.	Total.
B.—ESTABLISHMENT.										
<i>I.—Salaries—</i>	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
a. Conservators ..	14,351 9 9	.....	.....	.....	.....	.....	.....	.....	.....	14,351 9 9
b. Superior Officers ..	.....	14,830 0 0	7,950 0 0	6,956 1 1	6,616 12 4	3,481 1 6	7,960 0 0	4,642 0 0	4,100 0 0	56,555 14 11
c. Subordinate Forest and Depôt Establishments ..	.....	18,377 8 6	7,134 9 1	12,362 9 6	15,743 1 9	12,030 5 11	11,085 13 6	22,161 1 8	5,047 14 11	1,03,948 0 10
d. Office Establishments ..	6,073 5 1	2,664 4 2	984 15 6	1,757 9 3	2,727 2 9	3,187 0 0	2,741 12 7	2,266 13 2	1,044 0 0	23,446 14 6
e. Deputation and Special Allowances ..	398 5 0	.....	.....	.....	.....	428 10 0	.....	.....	.....	821 15 0
<i>II.—Travelling Allowances—</i>										
a. Conservators ..	3,518 11 8	.....	.....	.....	.....	.....	.....	.....	.....	8,518 11 8
b. Superior Officers ..	.....	3,111 14 9	1,671 0 0	1,512 9 3	3,008 9 2	1,425 1 10	2,520 0 0	1,949 2 7	1,117 11 10	16,316 1 5
c. Subordinate Forest and Depôt Establishments ..	.....	685 1 8	224 4 5	1,100 10 3	1,066 4 3	997 4 9	638 14 5	968 0 2	454 1 4	6,784 9 3
d. Office Establishments ..	2,865 13 0	774 8 2	409 4 9	540 14 6	738 14 10	778 13 10	880 0 8	681 0 0	436 12 0	8,166 1 9
<i>III.—Contingencies—</i>										
a. Stationery ..	0 9 0	271 5 7	91 11 1	173 8 3	220 0 10	292 4 9	315 2 1	469 12 1	103 15 6	1,938 5 2
b. Carriage of tents and records ..	662 14 2	194 9 6	130 2 10	229 3 9	487 8 8	370 15 6	240 6 2	157 11 6	144 11 6	2,618 3 7
c. Rents, rates and taxes ..	.....	379 9 8	270 0 0	236 0 0	20 0 0	240 0 0	60 0 0	71 2 6	286 4 7	1,363 0 9
d. Pay of Police Guards ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
e. Official postage ..	307 0 0	294 2 0	120 5 6	292 1 0	245 0 0	452 12 0	363 0 0	353 6 6	159 11 0	2,587 6 0
f. Sundries ..	671 10 7	1,463 1 1	238 10 2	1,158 6 11	1,209 14 9	1,229 14 3	631 15 1	549 5 6	369 3 9	7,522 2 1
Total B.—Establishments ..	28,849 14 3	43,046 1 1	19,224 15 4	26,319 9 9	2,688 5 4	24,909 4 4	27,507 0 6	84,269 7 8	13,264 8 5	2,50,079 0 8
Grand Total of Expenditure ..	28,849 14 3	1,16,242 11 0	22,495 8 1	56,951 8 6	1,92,523 11 9	1,38,819 6 9	69,414 8 0	61,687 15 7	17,628 9 0	6,94,613 12 11

No. $\frac{F.}{12042}$

Forwarded to the Conservator of Forests, Southern Circle, under Section 238 of the Forest Code.

Bombay, dated 9th August 1887.

GODREZJI D. PUDUMJI,
for Accountant General.

FORM No. 59.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Account Current for the year 1886-87.

Dr.

	Rs.	a.	p.		Rs.	a.	p.		Rs.	a.	p.
To Cash Balance	...	...	...	By 1 Refunds and Drawbacks—							
" VIII. Assessed Taxes—Income-tax—	...	...	...	Refunds Divided Heads—							
Deductions by Government	...	...	...	Forest	...	...	...		712	10	7
from Salaries and Pensions.	...	...	...	" 3 Land Revenue—							
" IX. Forest	...	...	...	Survey and Settlement Parties—Pro-							
" XII. Interest—	...	...	...	fessional Survey—Travelling allow-							
Interest on arrears of Revenue.	...	...	...	ances to officers	...	...	...		947	9	3
" XXIII. Stationery and Printing—	...	...	...	" 11 Forest	...	...	...		6,94,613	12	11
Other Press receipts—	...	...	...	" 14 Interest—							
Government Central Press...	...	...	...	Interest on other obligations—Refunds.	...	...	...		7	9	7
" Revenue Deposits—Forests	...	...	...	" 19 Law and Justice—							
" Advances Recoverable—	...	...	...	Jails—District Jails—Contingencies...					96	8	0
Forest Advances	4,16,315	12	2	" 32 Miscellaneous—							
Objection Book Advances...	108	8	0	Travelling allowances to Covenanted							
Tentage Advances to Government	...	...	...	and Uncovenanted Officers attend-							
officers	480	0	0	ing examinations	...	...	...		255	7	7
" Cheques and Bills—				" Revenue Deposits—							
Departmental Cheques	...	...	...	Forest	...	...	...		21,510	8	10
Forest Cheques drawn	...	...	...	" Advances Recoverable—							
" Forest Remittances—				Forest Advances	...	...	...				
Remittances to Treasuries...	177	12	1	Objection Book Advances	...	...	...		4,09,535	14	5
Inter-Divisional Transfers	69,950	13	6	" Cheques and Bills—					261	2	0
Inter-Departmental Transfers	133	0	10	Departmental Cheques—							
" Cash Recoveries	...	...	...	Forest Cheques (cancelled)							
" Accounts between India and Bombay—	...	...	...	Forest Remittances—							
Bengal Uncovenanted Service Family	...	...	...	Remittances to Treasuries	...	...	...		10,999	4	7
Pension Fund	...	...	...	Inter-Divisional Transfers	...	...	...				
									9,21,473	6	10
									70,503	15	2
									9,91,977	6	0

Accounts between Madras and Bombay—	Cash Recoveries ...	Accounts between Bombay and Marine—	IV. Items adjustable by the Marine Department ...	Accounts between Bombay and Public Works Department (Ordinary Branches)—	IV. Items adjustable by Public Works Department Inter-Departmental charges ...	Accounts between Bombay and Public Works Department (Railway Branches) Southern Marátha Railway—	IV. Items adjustable by Public Works Department ...	Closing Balance ...	Grand Total Rs.
III. Items adjustable by Madras Service Funds—									
Military Fund ...									
Accounts between Bombay and Public Works Department (Ordinary Branches) Payments into Treasuries by Civil officers on account of Public Works Department ...	367 2 9								
Accounts between Bombay and Public Works Department (Railway Branches) Southern Marátha Railway—	175 0 0								
III. Items adjustable by Public Works Department ...	11,839 6 10								
Grand Total Rs. ...	26,72,631 1 2								

No. $\frac{F.}{11748}$.
FOREST DEPARTMENT.

Forwarded to the Conservator of Forests, Southern Circle, under Section 238 of the Forest Code.

*Bombay, Accountant General's Office, }
9th August 1887.*

GODREZJI, D. PUDUMJI,
for Accountant General.

Southern Division, Kánara.	{ I.—Timber and other Produce removed from the Forests by Government Agency—									
	a.	Timber	...	...	...	...	...	...	...	...
	b.	Firewood and charcoal	...	...	...	...	...	...	...	...
	d.	Sandalwood	...	...	...	...	...	...	...	...
	e.	Grass and other minor produce	...	...	...	...	...	...	...	...
	{ II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—									
	a.	Timber	...	...	...	...	...	...	...	...
	b.	Firewood and charcoal	...	...	...	...	...	...	...	...
	c.	Bámbus	...	...	...	...	...	...	...	...
	d.	Grazing and fodder grass	...	...	...	...	...	...	...	...
	e.	Other minor produce	...	...	...	...	...	...	...	...
{ III.—Confiscated, Drift and Waif Wood										
Total Southern Division of Kánara										
Belgaum	{ I.—Timber and other Produce removed from the Forests by Government Agency—									
	a.	Timber	...	...	...	...	...	...	...	...
	b.	Firewood and charcoal	...	...	...	...	...	...	...	...
	c.	Bámbus	...	...	...	...	...	...	...	...
	d.	Sandalwood	...	...	...	...	...	...	...	...
	e.	Grass and other minor produce	...	...	...	...	...	...	...	...
	{ II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—									
	a.	Timber	...	...	...	...	...	...	...	...
	b.	Firewood and charcoal	...	...	...	...	...	...	...	...
	c.	Bámbus	...	...	...	...	...	...	...	...
	d.	Grazing and fodder grass	...	...	...	...	...	...	...	...
e.	Other minor produce...	...	...	...	...	...	...	...	...	
{ III.—Confiscated, Drift and Waif Wood										
Total Belgaum										
Dhárwár	{ I.—Timber and other Produce removed from the Forests by Government Agency—									
	a.	Timber	...	...	...	...	...	...	...	...
	b.	Firewood and charcoal	...	...	...	...	...	...	...	...
	d.	Sandalwood	...	...	...	...	...	...	...	...
	e.	Grass and other minor produce	...	...	...	...	...	...	...	...
	{ II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—									
	a.	Timber...	...	...	...	...	...	...	...	...
	b.	Firewood and charcoal	...	...	...	...	...	...	...	...
	c.	Bámbus	...	...	...	...	...	...	...	...
	d.	Grazing and fodder grass	...	...	...	...	...	...	...	...
	e.	Other minor produce...	...	...	...	...	...	...	...	...
{ III.—Confiscated, Drift and Waif Wood										
Total Dhárwár										

* The difference of Rs. 637 has been written off the accounts: vide G. R. No. 888 of 5th February 1887.

+ In last year's statement the Divisional Forest Officer had shown by mistake Rs. 30 in excess.

FORM No. 60—continued.

Division.	Particulars.	Outstandings at commencement of year.	Value of Sales and other Revenue during year.	Total.	Amount realized during year.	Balance due to the Department at end of year.	Remarks.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Bijápur	<i>I.—Timber and other Produce removed from the Forests by Government Agency—</i>						
	<i>a. Bámbus .. .. .</i>	.....	2 9 0	2 9 0	2 9 0	.....	
	<i>d. Sandalwood .. .. .</i>	.....	180 1 0	180 1 0	180 1 0	.....	
	<i>II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—</i>						
	<i>a. Timber .. .. .</i>	.....	1,419 4 6	1,419 4 6	1,419 4 6	.....	
	<i>b. Firewood and charcoal .. .. .</i>	.....	11,471 6 3	11,471 6 3	11,471 6 3	.....	
	<i>c. Bámbus .. .. .</i>	.....	1 3 2	1 3 2	1 3 2	.....	
	<i>d. Grazing and fodder grass</i>	38 8 0	4,615 11 0	4,654 3 0	4,654 3 0	.....	
	<i>e. Other minor produce... .. .</i>	.....	4,601 13 9	4,601 13 9	4,601 13 9	.....	
	<i>III.—Confiscated, Drift and Waif Wood</i>	.....	29 1 9	29 1 9	29 1 9	.....	
	Total Bijápur	38 8 0	22,321 2 5	22,359 10 5	22,359 10 5	.....	
Kolába	<i>I.—Timber and other Produce removed from the Forests by Government Agency—</i>						
	<i>a. Timber .. .. .</i>	.....	8,784 3 4	8,784 3 4	8,784 3 4	.....	
	<i>b. Firewood and charcoal .. .. .</i>	.....	459 7 3	459 7 3	459 7 3	.....	
	<i>c. Grass and other minor produce .. .. .</i>	.....	4 4 9	4 4 9	4 4 9	.....	
	<i>II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—</i>						
	<i>a. Timber</i>	4,158 12 0	1,03,111 14 6	1,07,270 10 6	1,07,270 10 6	.....	
	<i>b. Firewood</i>	*3,750 0 0	36,743 15 10	40,493 15 10	33,715 2 4	6,778 13 6	
	<i>d. Grazing and fodder grass .. .. .</i>	.....	1,362 12 3	1,362 12 3	1,362 12 3	.....	
	<i>e. Other minor produce... .. .</i>	.....	1,474 7 1	1,474 7 1	1,474 7 1	.....	
	<i>III.—Confiscated, Drift and Waif Wood</i>	.....	1,622 10 3	1,622 10 3	1,622 10 3	.....	
	Total Kolába	7,908 12 0	1,53,563 11 3	1,61,472 7 3	1,54,693 9 9	6,778 13 6	
	<i>I.—Timber and other Produce removed from the Forests by Government Agency—</i>						
	<i>a. Timber .. .. .</i>	.....	4,559 12 0	4,559 12 0	4,559 12 0	.....	
	<i>b. Firewood and charcoal .. .. .</i>	.....	51 0 0	51 0 0	51 0 0	.....	
	<i>c. Grass and other minor produce .. .. .</i>	.....	58 0 0	58 0 0	58 0 0	.....	

*Last year the Divisional Forest Officer had wrongly shown the estimated value as outstanding instead of the amount actually due. Hence Rs. 2,500 shown in excess have been omitted in this statement.

Ratnágiri ...	II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—									
	a. Timber ...	.....	94 14 5	94 14 5	94 14 5	94 14 5	94 14 5	94 14 5	94 14 5	.....
	b. Firewood and charcoal ...	.....	27 4 1	27 4 1	27 4 1	27 4 1	27 4 1	27 4 1	27 4 1	.....
Abstract of the Southern Circle.	c. Grazing and fodder grass ...	.....	284 9 7	284 9 7	284 9 7	284 9 7	284 9 7	284 9 7	284 9 7	.....
	d. Other minor produce ...	.....	21 5 9	21 5 9	21 5 9	21 5 9	21 5 9	21 5 9	21 5 9	.....
	III.—Confiscated, Drift and Waif Wood ...	.....	78 15 10	78 15 10	78 15 10	78 15 10	78 15 10	78 15 10	78 15 10	.....
Abstract of the Southern Circle.	Total Ratnágiri ...	.....	5,175 13 8	5,175 13 8	5,175 13 8	5,175 13 8	5,175 13 8	5,175 13 8	5,175 13 8	.....
	I.—Timber and other Produce removed from the Forests by Government Agency—	.....	8,13,293 11 3	9,71,692 1 9	8,17,448 3 8	1,01,360 13 8	1,54,243 14 1	1,54,243 14 1	1,54,243 14 1	.....
	a. Timber ...	1,58,398 6 6	1,01,832 8 3	1,01,974 8 3	1,01,360 13 8	1,01,360 13 8	613 10 7	613 10 7	613 10 7	For difference of Rs. 30 between this item and the last year's similar item vide remark against I. A in Dhárwar Division.
Abstract of the Southern Circle.	b. Firewood and charcoal ...	142 0 0	158 4 0	158 4 0	158 4 0	158 4 0	.....	.....	.....	For difference vide remark against this head under Kolaba.
	c. Bámbug ...	.....	4,263 6 1	4,346 10 1	3,834 11 1	3,834 11 1	511 15 0	511 15 0	511 15 0	For difference of Rs. 637 vide remark against this head under Belgaum.
	d. Sandalwood ...	83 4 0	91,044 3 8	97,111 4 8	94,692 11 6	94,692 11 6	2,418 9 2	2,418 9 2	2,418 9 2	
Abstract of the Southern Circle.	e. Grass and other minor produce...	6,067 1 0								
	II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—	.....	1,69,447 1 10	1,73,610 5 10	1,73,610 5 10	1,73,610 5 10	6,778 13 6	6,778 13 6	6,778 13 6	
	a. Timber ...	4,163 4 0	95,835 7 2	99,608 14 2	92,830 0 8	92,830 0 8	.....	.....	.....	
Abstract of the Southern Circle.	b. Firewood and charcoal ...	3,773 7 0	46,392 15 3	46,393 7 3	46,393 7 3	46,393 7 3	.....	.....	.....	
	c. Bámbug ...	0 8 0	58,864 11 7	59,326 3 7	59,323 3 7	59,323 3 7	3 0 0	3 0 0	3 0 0	
	d. Grazing and fodder grass ...	461 8 0	20,587 0 5	21,244 13 5	21,111 4 1	21,111 4 1	133 9 4	133 9 4	133 9 4	
Abstract of the Southern Circle.	e. Other minor produce ...	657 13 0								
	III.—Confiscated, Drift and Waif Wood ...	.....	14,721 2 10	14,721 2 10	7,593 10 10	7,593 10 10	7,127 8 0	7,127 8 0	7,127 8 0	
	Grand Total ...	1,73,747 3 6	14,16,440 8 4	15,90,187 11 10	14,18,356 12 2	14,18,356 12 2	1,71,830 15 8	1,71,830 15 8	1,71,830 15 8	

Conservator's Office, S. C.,
dated Belgaum, the 18th October 1887.

J. L. L. MACGREGOR,
Conservator of Forests, S. C.

FOREST DEPARTMENT, BOMBAY, SOUTHERN CIRCLE.

Outstandings and Liabilities on account of Contractors and Disbursers for 1886-87.

Division.	DEPARTMENT DEBTOR.			DEPARTMENT CREDITOR.			BALANCE DUE		Remarks.
	At commencement of year.	Recoveries in Cash and Value of Supplies and Work done during year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).	
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		
<i>Contractors.</i>									
Belgaum ...	...	1,262 5 6	1,262 5 6	1,262 5 6	.....	1,262 5 6	.....	...	
Dhárwar ...	...	2,650 0 0	2,650 0 0	.....	2,850 0 0	2,850 0 0	200 0 0	...	
Kánara, C. D. ...	...	11,089 3 9	11,089 3 9	6,482 3 9	4,607 0 0	11,089 3 9	.....	...	
Kánara, N. D. ...	...	65,979 9 6	65,979 9 6	62 8 6	65,962 9 6	66,025 2 0	45 8 6	...	
Kánara, S. D. ...	...	2,250 0 0	2,250 0 0	.....	2,250 0 0	2,250 0 0	.....	...	
Total Contractors ...	...	83,231 2 9	83,231 2 9	7,807 1 9	75,669 9 6	83,476 11 3	245 8 6	...	
<i>Disbursers.</i>									
Belgaum ...	...	62,583 15 10	62,583 15 10	839 15 11	63,505 11 7	64,345 11 6	1,761 11 8	...	
Bijapur ...	...	11,046 15 10	11,046 15 10	.....	11,094 0 1	11,094 0 1	47 0 3	...	
Dhárwar ...	...	28,790 4 0	28,790 4 0	.....	28,790 4 0	28,790 4 0	.....	...	
Kánara, C. D. ...	...	87,286 14 11	87,286 14 11	(a) 1,816 5 3	86,419 4 3	88,235 9 6	948 10 7	...	
Kánara, N. D. ...	...	59,014 11 1	59,014 11 1	16 11 6	59,011 8 11	59,028 4 5	13 9 4	...	
Kánara, S. D. ...	...	46,382 6 9	46,382 6 9	1,568 13 8	47,485 13 11	49,054 11 7	2,672 4 10	...	
Kolába ...	...	34,670 14 11	34,670 14 11	775 11 0	34,135 1 6	34,910 12 6	239 13 7	...	
Ratnágiri ...	...	3,308 6 1	3,308 6 1	63 1 2	3,424 8 8	3,487 9 10	179 3 9	...	
Total Disbursers ...	...	3,33,084 9 5	3,33,084 9 5	(a) 5,080 10 6	3,33,866 4 11	3,38,946 15 5	5,862 6 0	...	
Grand Total ...	...	4,16,315 12 2	4,16,315 12 2	12,887 12 3	4,09,535 14 5	4,22,423 10 8	6,107 14 6	...	

(a) Rs. 1,816-10-8 adjusted by a journal entry in the accounts for 1885-86: vide Government Resolution No. 2508 dated 21st August 1886.

No. $\frac{F.}{11743}$

Forwarded to the Conservator of Forests, Southern Circle, with reference to paragraph 238 of the Forest Code.

Bombay, Accountant General's Office, }
9th August 1887.

GODREZJI D. PUDUMJI,
for Accountant General.

FORM No. 62.

FOREST DEPARTMENT, BOMBAY SOUTHERN CIRCLE.

Financial Results of the year 1886-87.

Divisions	TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY.		OTHER REVENUE.		FORMATION, PROTECTION AND IMPROVEMENT OF FORESTS.	TOTAL.		Remarks.
	Receipts.	Charges.	Receipts.	Charges.		Receipts.	Charges.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Direction	...	...	...	...	...	...	...	
Northern Division of Kánara	3,62,791	1,82,686	84,811	28,850	3,013	4,47,602	28,850	
Central Division of Kánara	2,63,460	1,18,807	51,071	6,824	12,539	3,14,531	1,92,523	
Southern Division of Kánara	76,332	33,806	35,851	7,473	11,242	1,12,183	1,38,819	
Belgaum	2,14,927	84,583	43,500	14,367	15,712	2,58,427	59,415	
Dhárwár	91,272	36,521	22,983	15,948	10,020	1,14,255	1,16,243	
Kolába...	9,248	5,824	1,49,369	10,411	20,443	1,58,617	56,952	
Bijápúr	182	163	22,535	35,421	9,452	22,717	61,688	
Ratnágiri	4,669	8,104	792	12,881	8,892	5,461	22,496	
Total	10,22,881	4,70,494	4,10,912	1,32,807	91,313	14,33,793	17,628	
							6,94,614	

Conservator's Office, S.C.,
dated Belgaum, the 18th October 1887.

J. L. L. MacGREGOR,
Conservator of Forests, S.C.

No. 58 OF 1888.

REVENUE DEPARTMENT.

Poona, 7th January 1888.

MEMORANDUM.

In submitting to Government the Forest Administration Report of the Southern Circle for the year 1886-87, the Commissioner S. D. has the honour to record the following remarks:—

2. The variations in the areas of the different classes of forests are fully stated in paragraphs 4 to 6 of the report.

3. During the year the settlement work in Kolába was vigorously carried on by Mr. Sinclair, and the work is now virtually completed. Two settlement reports are now under consideration in the Commissioner's office.

4. The forest demarcation and settlement in the Ratnágiri District has been a failure. Mr. Woodward's proposals for the settlement of 22 villages in the Khánápur Táluka of the Belgaum Collectorate were, on the recommendation of the undersigned, negatived; and Mr. Wingate was directed to do the settlement of forests of the whole táluka, including those villages. In Kánara, the settlement of the areas in the Honávar, Sirsi, and Ankola tálukás, notified under Section 4 of the Indian Forest Act, is in progress. The report on the forest settlement of the Yellápur Táluka has lately been received in this office, and will shortly be submitted to Government. The reports on the demarcation and settlement of forests in the Bádámi, Hungund, and Bágalkot tálukás of the Bijápur District are under consideration by the Commissioner, and will be laid before Government when the grazing question is satisfactorily settled.

5. The observations of the Conservator (paragraph 23) about the heavy cost and slow progress of the forest survey that is going on deserve the special consideration of Government.

6. During the year, no working plans were drawn up, owing to the insufficiency of establishment. The Conservator, however, proposes to spare the services of another Sub-Assistant Conservator for employment on the preparation of working plans during the ensuing working season, and it is hoped that the next report will show greater progress in this important branch.

7. The total number of cases in which prosecutions were instituted during the year for breaches of forest rules was 152, as compared with 121 in the previous year. An increase in the number of prosecutions is apparent in all the districts except Bijápur. In Kolába, where the increase was the largest, the number of prosecutions rose from 44 to 78, and the cause assigned is illegal cultivation on dalhi lands. The decrease of 1 case in the number of unsuccessful prosecutions is insignificant. The number of cases compounded was the same as in the preceding year, while the amount of fines aggregated Rs. 2,336, against Rs. 1,501 in the previous year. These figures are not very satisfactory.

8. It is unsatisfactory to notice that forest fires were more numerous and the area burnt larger than in the preceding year.

9. The experiment of combining the raising of useful plants with kumri cultivation was again a failure in both Kánara and Belgaum; and it now appears pretty certain that the experiment will never succeed. It is, however, satisfactory to learn that the experiments made with *Pithecolobium Saman* and *Divi-Divi* were fairly successful.

10. In all the districts, except Bijápur, free grants of wood were made in the year under review. The value of the free grants amounted to Rs. 21,885, against Rs. 18,659 in the last year. The increase in the value of free grants occurs chiefly in Kolába, where the grants were given with the special sanction of Government.

11. The outturn of work during the year under report at the Kannigeri and Kirwatti Saw Mills was greater than in the preceding year, and it is the more satisfactory that this was effected at a smaller cost.

12. Comparing the year 1886 with 1885 it is observed that the gross and net receipts fell from Rs. 17,92,114 and Rs. 10,69,528 to Rs. 14,33,793 and Rs. 7,39,179 respectively and the charges from Rs. 7,22,586 to Rs. 6,94,614. Excepting the year 1885, the revenue is the largest on record. There was an unexpected increase in the revenue of that year on account of the considerable number of sleepers supplied to the Southern Marátha Railway Company, while the number of sleepers supplied to the company during the year under report was much smaller. This accounts for the decline. On the opening of the West Deccan line of the Southern Marátha Railway for through traffic the demand for timber and other produce of the Kánara forests will increase, and it may be confidently expected that the revenues of the Southern Circle will gradually but steadily increase in future years.

13. For nine months of the year under review the Forest Department of the Southern Circle was administered by Colonel Peyton, who vacated the post of Conservator on the 27th December 1886.

14. In Colonel Peyton's retirement Government has lost the services of an able officer whose constant endeavour was to promote forest conservancy and improvement without losing sight of the just requirements of the people.

15. The Commissioner S. D. during last touring season inspected a considerable portion of the forest area in the Southern Division, and was much pleased with the local arrangements in force.

W. H. PROPERT,
Commissioner, S. D.

Statement showing the Progress of Forest Demarcation and Settlement Work in the several Districts of the Southern Circle for the year 1886-87.

Class of Forests.	At the commencement of the year—Areas under Section 34 in which private rights have not been enquired into, settled and recorded.		AREA SETTLED DURING THE YEAR.				Area of Reserved Forests alienated under Section 26.		Area of Protected Forests disforested under Government orders.		At the end of the year—Areas under Section 34 in which private rights have not been enquired into, settled and recorded.	
	Sq. Miles.	Acres.	Chapter II of the Act.		Chapter IV of the Act.		Sq. Miles.	Acres.	Sq. Miles.	Acres.	Sq. Miles.	Acres.
			Sq. Miles.	Acres.	Sq. Miles.	Acres.						
Reserved Forests.	...	439	...	...	...	...	...	...	...	...	214	439
	...	221	...	...	...	...	...	...	...	...	360	221
	...	47	...	...	...	...	...	...	...	...	146	99½
	...	115	...	...	...	...	...	...	...	...	155	115
	...	13	...	...	...	...	...	...	...	...	20	13
Total	965	195	68	587	...	...	...	...	...	...	896	247½
Protected Forests.	...	321	...	...	...	...	...	...	...	...	2,508	321
	...	129	...	...	...	...	...	...	...	...	37	90½
	...	409	...	...	...	...	...	...	...	...	89	409
	Total	2,667	219	...	...	25	54	...	...	...	2,635	180½
Grand Total	3,632	414	68	587	25	54	...	...	6	624½	3,531	427½

Conservator's Office, Southern Circle, }
Camp Dháruvár, 17th January 1888.

J. L. L. MACGREGOR,
Conservator of Forests, S. C.

SIND CIRCLE.

No. 5396 of 1887.

REVENUE DEPARTMENT.

Commissioner's Office,

Karachi, 18th October 1887.

Submitted to Government.

2. There seems little for the Commissioner to say regarding this report which is concise and clear. The year has been uneventful and it is unnecessary to recapitulate the results of the ordinary administration of the department.

3. It is satisfactory to notice that both the gross and net revenue are the largest ever obtained in the Sind Circle. The expenditure is also of necessity very high as the forests depend for revenue chiefly on the demand for firewood.

4. The Commissioner considers that Colonel MacRae is entitled to credit for the efficient administration of the department in his charge.

C. B. PRITCHARD,
Acting Commissioner in Sind.

No. 741 of 1887-88.

From

LIEUTENANT-COLONEL J. G. MACRAE,
Conservator of Forests,
Sind Circle.

To

THE SECRETARY TO GOVERNMENT,
REVENUE DEPARTMENT.

Conservator's Office,

Hyderabad, 10th September 1887.

Sir,

I have the honour to forward herewith the Forest Administration Report of the Sind Circle for the year 1886-87, with its subsidiary Statements.

I have the honour to be,

Sir,

Your most obedient Servant,
J. G. MACRAE, Lieut.-Colonel,
Conservator of Forests, Sind Circle.

Through the Commissioner in Sind.

ANNUAL ADMINISTRATION REPORT OF THE SIND FOREST DEPARTMENT FOR THE YEAR 1886-87.

INTRODUCTION.

The area of the Sind Forests at the end of the year under report was 699 square miles and 409 acres, a gain of 26 square miles and 203 acres over the area as it stood on 1st April 1886. Of this 24 square miles and 101 acres was added by newly demarcated Reserves, and the balance is the net gain by changes of the river.

But the land lost by erosion was, much of it, valuable forest, whereas the land gained is mere sand-banks at present and its value depends on its further development.

2. Forest demarcation has been completed and the office of the Forest Settlement Officer is to be broken up.

3. Much damage was done by forest fires caused by cattle-breeders setting fire to the reed jungle and grass in Upper Sind with a view to checking the ravages of cattle-disease which was very prevalent in the district, otherwise the protection of the forest has been good and the relations of the people with the subordinates of the Department satisfactory. Two known thieves of forest material—men who had been previously convicted of similar offences, were caught in possession of a large quantity of timber evidently stolen from the Upper Sind Forests. They were convicted by the City Magistrate and sentenced to Rs. 400 and Rs. 450 fine respectively, and both to imprisonment for 12 months, but on appeal to the Sessions Judge of Shikarpur they were let off with a fine of Rs. 50.

4. The Revenue both gross and net is the largest ever shown in this Circle and gives a net result of six annas per acre of land under Forest management.

5. The export of wood to Bombay and Katiawar coast is fairly satisfactory and the export of charcoal to Aden and the Persian Gulf on the increase.

6. Mr. Tuljaram was appointed Sub-Assistant Conservator of Forests on the 24th of August 1886. No other changes in the Forest Staff have to be recorded.

CHAPTER I.

AREA AND BOUNDARIES.

7. The following statement shows the area of the Sind Forests as it stood on 31st March 1886, also the additions thereto and the exclusions therefrom :—

Area as it stood on 31st March 1886.		Area added during the year or gained by action of the river.		Area excluded during the year or lost by action of the river.		Area as it stood on 31st March 1887.	
Sqr. Miles.	Acres.	Sqr. Miles.	Acres.	Sqr. Miles.	Acres.	Sqr. Miles.	Acres.
673	206	34	553	8	350	699	409

A very extensive area has been lost by the action of the river in Upper Sind. The Shahu and Jamshero forests have been so much eaten into by the river that the former has nearly disappeared and only a few hundred acres of the latter are left. The river in this part of the Province winds very much and has several old beds; both the threatened forests will probably disappear unless a decided change takes place in the set of the river.

In Central Sind the loss by erosion has not been serious but in Lower Sind 1,350 acres have been lost, 830 of which were good Babul Forest.

The total area lost by erosion is 5,470 acres, the fresh alluvial land thrown up amounts to 6,850 acres. Rs. 1,531 were spent in keeping eroding banks clear of timber. Rs. 3,940 were realized by the sale of material so cut and material to the value of Rs. 360 remained on hand at the end of the year.

8. A "Kacha" or alluvial accretion to the Lalia Forest which was thrown up in 1877 was worked for the first time this season for Railway fuel (Tamarisk). The quantity taken out was not very large but there is abundant material on the Kacha and the yield will be larger yearly. It is satisfactory to know that land lost by erosion can be replaced by workable forest in ten years' time. The "Kachas" moreover that are, as a rule, thrown up on one frontage where erosion takes place on another are of immense value as grazing-grounds, and for the raising of fodder-crops.

9. The usual statement giving the details of land selected for forest purposes during the last and previous years, and that finally constituted Reserved Forests is given below :—

Land selected for Forest purposes and notified under Section 4.				Land finally settled and constituted Reserved Forests during the year under report.		
Name of Forest.	Taluka.	Area in acres.	Year in which originally notified.	Name of Forest.	Taluka.	Area in Acres.
Shikarpur	Shikarpur.	49,159-0	1880	Bagban.	Dadu.	1,946-35
Pir Nazir.....	Do.	18,549-0	1882	Phaka.	Do.	2,206-30
Kaper Shah.....				Pipri.	Do.	925-20
Mohro Mari				Gidarji.	Manjhand.	854-35
Amrote	Labdaria.	10,844-0	1882	Raharki.	Ubauro.	1,653-30
Muso	Do.	4,311-0		Reti.	Do.	2,287-35
Ali Ganj.....	Tatta.	431-20		Rangu.	Do.	971-22
Hilaya.....		849-18	1884	Naruli.	Do.	1,376-14
Shah Lanko.....		312-10		Bhan.	Sehwan.	1,138-3
Tatta		12,388-30		Kolubori.	Do.	747-25
Gharko.....		933-23		Khathar.	Hyderabad.	39-30
Chachh		3,361-27		Raiswah.	Shikarpur.	904-20
Ghangherko		6,210-30		Messa.	Kotri.	308-0
Budo-dero ...	Tigir and Labdaria.	1,617-15	1884			15,461-19
Soi		5,851-0				
Gajidero.....		5,661-15				

Land selected for Forest purposes and notified under Section 4.				Land finally settled and constituted Reserved Forests during the year under report.		
Name of Forest.	Taluka.	Area in acres.	Year in which originally notified.	Name of Forest.	Taluka.	Area in Acres.
Rohri	Rohri.	15,393.3	1885			
Ghangherko	Tigir.	2.0	1885			
Lakhi	} Sukkur.	3,592.15	} 1885			
Ghari Halim		2,081.20				
Gharichand	Jacobabad.	19.35	} 1885			
Dilmurad	Thul.	48.9				
Bangal Kalochi	Mirpur.	89.0	1885			
Mirpur	Mirpur.	8,566.24	1885			
Ghotki	Ghotki.	31,661.24	1885			
Kadrapur	Sukkur.	78.30	1885			
Jamshero	Ghotki.	57.20	1886			
Ghari Yasin	Naushahro Abro.	26,891.13	1886			
Mahomedpur	} Jacobabad.	2,577.34	} 1886			
Hazaro		3,421.21				
Khairwah		56.30				
Gokalpur		64.30				
Mirpur	} Thul.	2,309.39	} 1886			
Mehrabpur		4,817.37				
Bakhtawarpur		6,059.38				
Jagan		2,316.15				
Tarai	} Naushahro Abro.	2,349.5	} 1887			
Chango Rohuja		1,749.35				
Choi		3,132.20				
Adamji		4,352.25				
Phohyari		473.4				
Masti Khan		225.0				
Kacho Alibhar	} Sujawal.	3,000.0	} 1887			
Do. Surjani		3,410.0				
Do. Ketī Saidino		2,500.0				
Naruli	Ubauro.	5.3	1887			
	Total...	2,51,784.37				

10. The Forest demarcation in Sind has been practically completed and the Forest Settlement Officer's Establishment will be broken up during the hot weather.

11. The total expenditure including the salaries of the Office Establishment of the Forest Settlement and Demarcation Officer in Sind incurred during the year under report in the creation and constitution of forests amounted to Rs. 2,562-9-2.

12. The demarcation of forests in the Kashmor Taluka has been postponed, but by agreement between the Deputy Commissioner, Upper Sind Frontier, and the Conservator, with the sanction of the Commissioner in Sind, the extensive jungles in the taluka are left under the protection of the Forest Department till such time as it will be advisable to undertake regular demarcation; perhaps after the introduction of the Revenue Survey Settlement.

CHAPTER II.

SURVEYS, WORKING PLANS AND ANNUAL PLANS OF OPERATIONS.

13. The survey of the forests on a scale of four inches to the mile has been continued. The progress made has not been as great as it might have been, owing to the work of the only Surveyor procurable being broken into by the necessity for sending him up to the Kashmor Taluka to make surveys of two tracts of land that it was intended to take up for Forest purposes.

The surveys of Forests prosecuted are as under :—

Phatah.....	258 acres.
Khadi	4,500 „
Laikpur	7,406 „
Total...	12,164 „

14. The plan of working out the compartments for fuel in succession and closing them for reproduction, has been adhered to in respect of the forests generally, but in the Laikpur forest, a working plan the details of which are given below, has been introduced tentatively.

The Laikpur Forest is one some distance from the river and having a very precarious water-supply, produces chiefly Kandi but is capable of yielding much material for Railway fuel. Its distance from the river, however, makes it expensive to work. To get the wood cut and delivered at paying rates and at the same time to get water on the land for the general benefit of the forest the following arrangement has been made with a Zamindar. He undertakes to clear the compartments in succession of all the Kandi on them and deliver the wood resulting from the fellings at Kotri at a fixed rate. He is to be permitted to cultivate the land cleared for two seasons. He makes his own arrangements for water and pays the usual land assessment. At the end of the second year he is to fence in one compartment and receive another to clear and cultivate, and the same the following year, so that every year one compartment will be cleared, and another that has been watered for two seasons, closed for reproduction. The agreement to cease if the Zamindar does not abide strictly by it and work in the interests of the Department.

The Zamindar has worked well so far, and as Kandi coppice raised in this way is always very satisfactory I have every reason to believe the plan will be highly successful.

15. The boundaries of the new Reserves have been laid down by a cleared path 20 feet wide and earth cairns with a post in the middle at each bend and at every five chains along the straight. The brushwood resulting from the clearing of the boundary-path is thrown up as a fence on the inner edge of the boundary-path and as far as practicable simultaneously with the laying down of the boundaries the forests have been cut up into compartments.

One hundred and eighty-four miles of compartment lines have been cut and the boundaries of the following Reserves laid down :—

Raheki.	Phaka.
Reti.	Noabad.
Rangoo.	Bhan.
Narli.	Gidarji.
Dangar.	Messa.
Phati Bilawal.	Khathar.

CHAPTER III.—PROTECTION AND IMPROVEMENT.

SECTION I.—ESTABLISHMENTS.

16. Mr. Tuljaram was appointed Sub-Assistant Conservator of Forests on the 24th August 1886.

No other change has taken place in the permanent protection or office establishment of the Sind Circle, and I have nothing particular to note under this head.

SECTION II.—GENERAL PROTECTION AND BREACHES OF FOREST LAW.

17. The general protection of the forests as evidenced by their condition and the reports of the Divisional Forest Officers is very good, and the conduct of the Protective Staff on the whole has been satisfactory.

18. The following table shows the number of cases tried before Magistrates, with results :—

Name of Division.	Number of cases tried before Magistrates.		Number of convictions.	
	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur	23	20	7	12
Jacobabad	41	18	12	13
Naushahro	14	4	6	9
Hyderabad.....	16	13	11	12
Jerruck	4	1	1	1
Total...	98	58	37	47

The number of acquittals as compared to convictions is still very high, but the fact can only be attributed to the difficulty of getting convictions in Forest offences.

19. No prosecution is permitted without the sanction of the Divisional Forest Officers and the enormous number of offences compounded as compared to prosecutions shows that Divisional Forest Officers are not inclined to send up petty cases for trial.

I may here quote a case illustrating the difficulty of getting convictions in cases of Forest offences.

Udho and Lalu who had been formerly convicted of theft of timber from Government forests and who have the reputation of preying on the Upper Sind Forests were found in possession of timber which had evidently been stolen from a Government Forest, and which they admitted had come from a Government forest, but that they had obtained it from one Nural who had bought it from the Forest Department. Nural repudiated this statement. Most of the logs had no marks, others had fictitious numbers stamped on them that the register showed had not been stamped on the description of logs on which they were found, and which were in the possession of the accused. The case was tried before the Town Magistrate, Sukkur, and the accused were convicted of theft and awarded twelve months' imprisonment and a fine of Rs. 400 and 450 each. But on appeal to the Sessions Judge of Shikarpur they were acquitted of the chief offence and fined Rs. 50 for importing timber into Sukkur without a duly qualified pass.

20. A good many of the cases in which conviction has not been obtained are of assaulting Forest guards. These would be always difficult cases to prove as villagers are not likely to give evidence in favour of a Forest guard and against their own tribesmen, and no other kind of witness is likely to be available.

21. The cases compounded are given below :—

Division.	Illicit grazing.		Theft.		Other offences.		Compensation.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur... ..	299	293	49	67	7	15	2,002	3,265
Jacobabad	...	12	...	3	...	1	...	87
Naushahro	...	...	...	16	...	...	...	35
Hyderabad... ..	357	357	...	5	...	2	304	231
Jerruck... ..	319	282	28	6	...	3	450	338
Total.....	975	944	77	97	7	21	2,756	4,006

On the whole there is not much crime to complain of, and the relations of Forest subordinates with the people are satisfactory, except in respect of the Cattle-breeders in the Shahbander District where illicit grazing in the Forest is very common and leads to collisions between the maldars (cattle-breeders) and the Forest guards.

SECTION 3. FIRES.

22. In Upper Sind the forest fires were very extensive and destructive. It was feared that this *would* be the case. There was much cattle-disease in the district and the cattle-breeders believed that it would not cease till the old reeds and grass had been burnt. There was much truth in this as the dead cattle were lying rotting in the high reeds and grass and infecting the sound cattle grazing in them. The people to save their cattle set fire to the grass wherever they could do so without fear of detection, and an area of nearly eleven thousand acres was burnt. About half was chiefly reeds and grass of not much account but the rest was good jungle, including a great number of compartments under reproduction that were nearly ready to work again. These compartments have been worked once already and their destruction causes a loss of many years' protection. Only one case is reported of a man being caught setting fire to a forest and being convicted of the offence.

In Central and Lower Sind the forest fires were unimportant and very little damage was done by them.

23. The protection of the Upper Sind Forest from fire especially in a season like the one under report is simply hopeless. The only practical plan of saving good jungle from fire in this district is what I have before advocated but which I regret does not commend itself to the Government of India, and this is to divide the Forests into grazing and timber blocks. The former to consist of the tracts of reed and coarse grass with a few scattered bushes struggling for existence against the recurring fires. The area set apart for grazing should be freely burnt so as to provide fresh young grass. This would increase the revenue from grazing fees, benefit the people and tend to save the better part of the forests from fire.

As I have said before fires in such jungles are likely to do more good than harm.

If the reeds are protected they are sure to destroy when they do catch fire any tree growth that may come up with them and their being burnt is merely a question of time.

But if the reeds are burnt and the fresh shoots kept down by cattle, the next inundation may drown the reed roots and give the Tamarisk and Kandi a chance of over-topping the next crop of reeds and grass that may come up.

The Shahpur forest is a case in point. All the lower part of this forest I can remember as a sea of reeds and grass the scene of extensive fires. Some years ago the entire area of low-lying land was burnt very late in the season. The next inundation submerged the roots of the reeds before they had time to shoot again and killed them, the next year the Tamarisk coppice that had been kept down by the fires came up with such strength that it over-topped the grass, and now that part of the forest is a dense Tamarisk jungle safe from fire, and will, in a year or two, yield immense quantities of locomotive fuel. It was worked a little for thin wood last year.

By widening the compartment lines of the squares to be burnt and choosing a still day for firing the reeds, the risk of the fire extending beyond the limits it was intended to reach would be very slight.

24. The following comparative statement gives the number of fires and the area burnt during the previous and the year under report :—

Division.	Number of Fires.		Area burnt.	
	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur	53	79	8,046	11,029
Jacobabad	6	7	88	90
Naushahro	13	9	590	882
Hyderabad	7	12	245	579
Jerruck	2	12	33	153
Total	81	119	9,002	12,733

SECTION 4. GRAZING.

25. During the year under report the scale of grazing fees was revised and the forests of the circle were classed as 1st, 2nd and 3rd according to the quality of grazing they can afford, and the following scales were made applicable to each class :—

1ST CLASS RATE OF GRAZING FEES.

Camels	4 annas a month.
Buffaloes... ..	3 " "
Horses, Cows and Bullocks	1½ " "
Donkey	1 " "
Goats and Sheep	3 pies "

2nd CLASS.

Camels	4 annas a month.
Buffaloes... ..	1½ " "
Horses, Cows and Bullocks	9 pies "
Donkeys... ..	6 " "
Goats	3 " "
Sheep	2 " "

3RD CLASS.

Camels	4 annas a month.
Buffaloes	1 " "
Horses, Cows, Bullocks and Donkeys	6 pies "
Goats	3 " "
Sheep	1 " "

The first class includes all the old river-side forests in which the old rates of grazing fees, *i. e.*, 1st class have been retained. The other two classes are for forests demarcated since 1879, in which the grazing is poorer than in the river-side forests.

It will be noticed that the rate of fees for goats and camels is the same in all three classes. The reason for this is obvious, being browsing animals, one kind of forest affords as good feed to them as another and their presence is equally objectionable in all.

The inundation had been a high one and all the forests that are usually flooded were well watered and afforded good grazing and the Babul pod crop, which is collected for fodder, was a fairly good one.

SECTION 5. NATURAL REPRODUCTION.

26. In Upper Sind 48 compartments, including a good many that had been burnt, with an area of 6,840 acres, after being cleared of all available material for locomotive fuel were closed for natural reproduction during this year. But camels and goats only are excluded. The horned cattle do not eat Tamarisk, and Kandi coppice is so well protected by its own thorns that it is safe from them; any damage they may do is more than compensated for by their keeping down the grass which is such a source of danger in young forest. In Central and Lower Sind an area of 4,966 acres was closed for reproduction. In these parts of the Province where much Babul grows the compartments under reproduction are closed to horned cattle as well as all other kinds of beasts.

27. An area of 2,921 acres in which the new growth was sufficiently strong was opened to grazing during the year, leaving a total area of 20,440 acres closed.

The results of closing for reproduction are very satisfactory where the young growth has not been burnt or killed by frost. The damage by fire is confined to Upper Sind and has been very great. The damage done by frost is comparatively trifling, the roots of the majority of the Babul seedlings being still alive though the tops had been killed. Frost seldom destroys the whole crop of seedlings, the greater part of them come up again and after that as a rule they are safe except from very severe frost.

28. The Kadrapur block No. 2, Sukkur Division, which was burnt last year was cleared of all salcable material and closed again. This block was very nearly ready to work when it was burnt and it is interesting to note the results attained by mere closing and without any artificial irrigation. The block is 450 acres in extent. It only gets water in seasons of high flood when surplus water escapes into it from neighbouring Zamindari canals. The growth on it is Kandi and Bhan. It was closed in 1878. I saw it then, it was as nearly as possible an open Maidan; it had been very recently burnt and all the tree growth destroyed, the grass and coppice shoots of Kandi and Bhan were coming up again.

The block was fenced in and after three or four years opened to grazing by horned cattle only. But the grass had become so high that the cattle made very little impression on it. Last year it was burnt and three-fourths of the tree growth on it killed. The yield from the trees that had been burnt and which are the growth of only seven years is as under—

Bhan rafters	8,221
Bhan posts	6,159
Locomotive fuel	34,525 C. ft.
Ordinary fuel	7,273 Mds.

SECTION 6. ARTIFICIAL REPRODUCTION.

29. Owing to want of funds nothing of much importance was done under this head.

In the Sukkur Division $7\frac{1}{2}$ acres were added to the Tali plantation but the frost killed some of the seedlings, 4,000 survived and were from one to three feet in height at the end of the year. A plot of $7\frac{1}{2}$ acres was ploughed and sown with Babul. The seedlings suffered from frost but have shot again and are reported to be doing well. Another plot of 20 acres, the site of former cereal cultivation, was also sown with Babul and is reported to be doing well.

Tali seedlings 225 in number were planted along a bund which has been lately put up by this Department to retain flood-water for the irrigation of the Kadrapur forest.

The old Tali plantation, some 90 acres in extent which are the result of small operations that were carried out between 1876 and 1882 during the time Mr. Dasai was District Forest Officer in Sukkur were thinned out. All the trees to be felled were marked by the District Forest Officer and only the crooked and useless ones, and such as were growing too thickly together, were taken out.

The result of the thinnings gave 23,125 cubic feet locomotive fuel, 50 maunds ordinary fuel, and 77 cubic feet of timber in small scantlings. The results are somewhat remarkable if the age of the plantations is kept in view, and the fact that merely the refuse was taken out.

I saw the thinning in progress and they did not appear to make an appreciable difference in the appearance of the plantation.

I think this is the first instance on record in the history of the Forest Department in the Bombay Presidency of forest material artificially grown by the Department being disposed of in any quantity.

30. In other Divisions the want of funds has prevented Planting operations being taken in hand ; the existing plantations were kept up.

SECTION 7. EXPERIMENTS.

31. *Prosopis Glandulosa* which was grown as an experiment over an area of $3\frac{1}{2}$ acres in 1884 has established itself well and required no care after the first season, and has had no water since except rain water. It appears to be suitable for growth under natural conditions in Sind, but all the broadcast sowings of its seed that have been made have been failures. It is only of value as a fodder plant for its pods.

32. The experiment with Asri cuttings was continued by Mr. Dasai but the results are not satisfactory, only 112 having succeeded out of 1,500 planted, but he says this is due to want of care on the part of the Forester and he hopes to show better results under personal supervision.

SECTION 8. COMMUNICATION AND BUILDINGS.

33. There were no funds available for anything but urgent repairs to existing buildings.

CHAPTER IV.—YIELD AND WORKING.

SECTION 1. DEPARTMENTAL OPERATIONS.

34. The following statement gives the details of the working of the Wood Depots :—

Name of Depot,	Stock on hand on 1st April 1886.			Added during the year 1886-87.			Disposed of during the year 1886-87.			Balance on 31st March 1887.		
	Timber.	Posts and rafters.	Fuel.	Timber.	Posts and rafters.	Fuel.	Timber.	Posts and rafters.	Fuel.	Timber.	Posts and rafters.	Fuel.
	C. ft.	No.	Mds.	C. ft.	No.	Mds.	C. ft.	No.	Mds.	C. ft.	No.	Mds.
Shikarpur	...	320	40	25	18,755	...	25	19,075	40	...	...	...
Sukkur	1,584	1,516	165	7,995	39,119	8,507	5,592	24,021	6,112	3,987	16,614	2,395
Rohri	13	1,345	...	1,758	13,965	...	1,050	9,172	...	721	6,138	...
Larkana	642	1,104	...	...	1,000	10,000	204	1,103	2,803	438	1,001	7,197
Sehwan	...	7,989	...	53	1,716	...	53	9,594	...	...	111	...
Karachi	2,115	...	1,405	...	73	184	372	73	1,589	1,743	...	...
Tatta	361	2,142	...	...	...	...	24	420	...	337	1,722	...
Keti Bander	39	...	6,654	8,238	...	1,242	8,262	...	7,708	15	...	188
Kotri	975	...	8,539	3,469	...	1,08,144	3,620	...	1,06,521	824	...	10,162
Hyderabad	12,944	2,334	947	934	1,77,705	71,106	13,187	1,09,919	53,561	691	70,120	18,492

35. A statement showing the quantity of timber and fuel disposed of at each Depot during the year under report and the previous year is given below :—

Name of Depot.	Timber, C. ft.		Posts and rafters.		Fuel, Maunds.	
	1885-86.	1886-87.	1885-86	1886-87.	1885-86.	1886-87.
Shikarpur	...	25	1,990	19,075	1,110	40
Sukkur	4,447	5,592	15,479	24,021	1,195	6,112
Rohri	524	1,050	4,265	9,172	...	...
Larkana... ..	332	204	1,483	1,103	3,300	2,803
Sehwan... ..	210	53	6,226	9,594	...	...
Karachi... ..	243	372	501	73	7,756	1,589
Tatta	212	24	688	420	30	...
Keti Bander... ..	5,220	8,262	...	...	3,365	7,708
Kotri	2,802	3,620	75	...	1,02,740	1,06,521
Hyderabad	9,102	13,187	1,60,127	1,09,919	61,820	53,561

36. No change has been made in the system of working the Depots. The Hyderabad Depot is on the share system, all the others are worked departmentally in the ordinary way.

37. The Karachi Depot was found to be financially so unsuccessful that it has been abolished and the Establishment utilized on the Protection staff, where it was urgently required on account of the large area of newly demarcated Reserves that have been added to the Circle.

38. There is an increase in the sales in all the Upper Sind Depots, due to the better demand for timber that exists now and to meet which adequate arrangements were made by the Divisional Forest Officers, Sukkur and Jacobabad. The strict supervision exercised by Mr. Showkiram, Divisional Forest Officer, Sukkur, on the import of foreign timber in Sukkur and the capture and prosecution of Udho and Lalu alluded to in para. 19 of this report have also added to the demand for timber at the Government Depots.

39. The town of Shikarpur is supplied with firewood brought in by camel, cart and donkey-men under the permit-pass system: there is, therefore, such little demand for firewood at the Depot that it does not pay to keep it on sale there.

40. In Central Sind the Sehwan Depot shows an increase owing to better demand, and the Larkana Depot shows a falling off for the want of it. Larkana is also supplied with firewood under the permit-pass system and the demand for that article at the Depot is precarious, being limited in a great measure to brick and lime-burning contractors who require a considerable quantity at a time.

41. In the Hyderabad and Kotri Depots there is an increase under sales of "timber" but a falling off in posts and rafters—fluctuations due to the local demand. There is a slight falling off in firewood due to the same cause, as the Depot is kept well stocked.

42. In Lower Sind the Karachi Depot was doing such little work that it has been abolished. The poor sales at the Tatta Depot are attributed by the Divisional Forest Officer to the sale of large quantities of timber cut on canal banks; this is quite possible. Splendid Babul trees grow on both banks of the numerous canals that run through the district, numbers fall yearly or have to be removed when they endanger canal banks or embankments, and the usual practice of the Irrigation Department is to give the trees gratis to whomsoever will bear the expense of cutting and removing them; no other course appears feasible owing to the low price of wood in the district.

43. The Keti Bander Depot is hardly a sale Depot now; it is maintained for checking the enormous quantities of wood landed at Keti Bander for transport to Karachi, Bombay, and Katiawar ports.

44. A statement of timber supplied to the State Railway and other Departments direct by Departmental agency from the forests is given below.

Name of Department.	Babul Bolsters.	Babul Brake Block.	Babul Sleepers.	Babul Logs.
North-Western Railway	1,012	2,990	1,071	...
Karachi Harbour Works	...	...	1,300	...
Gun Carriage Factory, Bombay	...	...	...	445

45. The proposed experimental delivery of 5,000 cheap Babul sleepers to the North-Western Railway alluded to in para. 38 of last year's report nearly ended in a fiasco.

The original agreement was that sleepers of three classes should be tried—1st class prime timber straight sawn true on all four sides—2nd class sound timber sawn on two sides straight horizontally but not necessarily straight vertically, axe trimmed on two sides—3rd class half round, the stems of trees of proper girth sawn in two and outside slabs with beds made for chairs.

The 3rd class were to be in larger proportion than either of the other kind. The sleepers were cut in accordance with these stipulations and the Manager was asked to depute some one to take delivery of them; in the meanwhile the Manager had added the stipulation that *all* the sleepers must be free of bark and sapwood. Now the majority of the sleepers, the half-round ones, were the trunks of trees sawn in two, the bark of course could be stripped off but a tree that grows with heart-wood on its outer surface has yet to be evolved by nature, consequently the majority of the sleepers were at first rejected, but since then the Railway authorities have consented to take all that will give a thickness of $4\frac{1}{2}$ inches under the chairs where the bed for these is cut out. In the meanwhile a large number of sleepers rejected by the Railway were taken by the Port Engineer, Karachi. It would have been a great pity if the experiment with half-round sleepers had been allowed to fall through. Their great merits are extreme cheapness and abundant supply.

46. The quantity of timber cut departmentally and disposed of in the forest is given below. Operations under this head are unimportant.

Division.	Timber. C. ft.	Bhan Posts. No.	Bhan rafters. No.	Jhau rafters. No.	Kirrir rafters. No.	Babul rafters. No.	Babul Posts. No.
Sukkur	1,088	524	2,008	100	...	...	...
Jacobabad.....	14	...	...	...	...	...	...
Naushahro.....	1,520	100	2,250	9,375	800	...	37
Hyderabad.....	2,587	200	1,640	...	...	...	...
Jerruck.....	1,092	...	...	1,400	...	...	...
Total.....	6,301	824	5,898	10,875	800	...	37

47. The following statement shows the quantity of firewood supplied to the State Railway, other Departments, and public bodies during the year under report and the previous year :—

To whom supplied.						Firewood in Maunds.	
						1885-86.	1886-87.
North-Western Railway	...	...	...	...	...	12,83,220	19,40,425
Sind Railway ...	...	...	...	...	...	20,000	...
Commissioner's Steamer	...	...	...	...	...	9,138	13,281
Indus Ferry Steamers	...	...	...	...	...	2,10,195	2,11,738
River Conservancy Department	...	...	...	...	...	5,818	6,583
Public Works Department	...	...	...	...	...	169	125
Karachi Harbour Works	...	...	...	...	...	43,684	54,221
Commissariat Department	...	...	...	...	...	25,193	28,077
Hyderabad Water Works	...	...	...	...	...	30,175	42,500
Sukkur Municipality	...	...	...	...	...	4,000	1,800
Hyderabad Jail	...	...	...	...	...	2,765	2,578
Government Farm, Hyderabad	...	...	...	...	...	6,100	6,500
Total.....						16,40,457	23,07,828

The quantities are according to indent, and the arrangements made for delivering worked smoothly.

48. The quantity of firewood exported to Bombay and Katiawar ports is smaller than it was last year, but this is due to the fact that the man who

took the contract for exporting wood, also has the contract for supplying the Harbour Works in Karachi and the Commissariat Department, and as there was a difficulty in getting boats, &c., he could not get enough for both Karachi and Bombay, he devoted his attention chiefly to the former. His Bombay contract is from November 1886 to October 1887, and he hopes to export the full quantity of 3,00,000 cubic feet before the expiry of his contract. He will probably fulfil his contract as he is liable for the royalty on all the wood short of 3,00,000 cubic feet he fails to export, and the Contractor who preceded him forfeited Rs. 506 for failing to remove the full quantity he had undertaken to export.

49. A comparative statement for two years of the total quantity of firewood and charcoal cut or manufactured is given below :—

Name of Division.	Firewood in Maunds.		Charcoal in Maunds.	
	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur.....	1,075	3,941	...	...
Jacobabad.....	6,300	18,747	...	...
Naushahro	18,331	8,525	1,939	3,675
Hyderabad.....	7,263	11,207	710	815
Jerruck.....	1,14,268	1,62,280	14,916	24,838
Total.....	1,47,237	2,04,700	17,565	29,328

The increase in charcoal is due to the export of that article to Aden and the Persian Gulf.

SECTION 2. REMOVAL OF PRODUCE BY PURCHASERS.

50. Under this head timber operations are not very extensive for reasons already explained in former reports.

51. The value of timber removed by purchasers is given below for two years :—

Name of Division.	Timber.	
	Value.	
	1885-86.	1886-87.
	Rs.	Rs.
Sukkur	2,053	2,518
Jacobabad	2,710	1,723
Naushahro	170	405
Hyderabad	439	526
Jerruck	345	590
Total.....	5,717	5,762

52. The following table gives value of firewood removed by purchasers other than those who remove it under the Ghat or permit-pass system which is given separately :—

Name of Division.	Firewood.	
	Value.	
	1885-86.	1886-87.
	Rs.	Rs.
Sukkur	767	674
Jacobabad	910	92
Naushahro	157	70
Hyderabad	1,865	1,525
Jerruck	1,294	344
Total.....	4,993	2,705

The above is wood removed from the forests for lime and brick-burning.

53. The receipts at the different Ghats or Nakas under the permit-pass system for two years is given below :—

Division.	Name of Ghat.	Revenue realized.	
		1885-86.	1886-87.
		Rs.	Rs.
Sukkur	Rahuja	10,329	10,275
	Jhali		
	Rohri		
Jacobabad	Sadar	12,907	14,786
	Stewart		
	Khura		
Naushahro	Larkana	2,765	2,748
Hyderabad	New Fuleli	709	842
	Old Fuleli		
	Hajipur		
Total.....		26,710	28,651

The increase is due to greater demand.

SECTION 3. FREE GRANTS.

54. Free grants of timber to the value of Rs. 1,006 were made to poor agriculturists, and timber and firewood to the value of Rs. 384-0-0 was removed gratis by Public Works Department Contractors under the authority of Government Resolution No. 2432 of 7th May 1879.

SECTION 4. SUMMARY OF PRODUCE.

55. The following is a comparative statement for two years of the timber cut and removed from the forests by Departmental Agency including that brought to Depôts :—

Division.	Timber of all kinds in cubic feet.		Posts. No.		Rafters. No.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur	5,193	7,661	1,082	6,124	8,774	29,298
Jacobabad	248	39	386	6,795	3,223	12,280
Naushahro	2,150	1,777	4,172	1,750	65,538	21,509
Hyderabad	19,863	19,229	4,907	5,919	1,05,042	1,05,991
Jerruck	9,150	9,750	2,066	420	1,417	1,473
Total	36,544	36,456	12,613	21,008	1,83,998	1,70,551

56. The quantity of timber cut and removed by purchasers is given below :—

Division.	Timber of all kinds in cubic feet.		Posts. No.		Rafters.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur	2,483	1,988	147	753	47,266	53,522
Jacobabad	2,359	1,571	3,670	2,306	68,872	48,712
Naushahro	384	2,465	8	...	3,392	5,842
Hyderabad	340	927	1,235	600	2,375	7,791
Jerruck	386	1,536	315	274	223	7,220
Total	5,952	8,487	5,375	3,933	1,22,128	1,23,087

57. The total yield in timber of each Division is as under for two years :—

Division.	Timber of all kinds in cubic feet.		Posts. No.		Rafters. No.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur	7,676	9,649	1,229	6,877	56,040	82,820
Jacobabad	2,607	1,610	4,056	9,101	72,101	60,992
Naushahro	2,534	4,242	4,180	1,750	68,928	27,351
Hyderabad	20,143	20,156	6,142	6,519	1,07,417	1,13,782
Jerruck	9,536	11,286	2,381	694	1,640	8,693
Total	42,496	46,943	17,988	24,941	3,06,126	2,93,638

58. The total yield in firewood of each Division is given below :—

Division.	Sold at Depots.		Sold on edge of Forests.		Supplied to Departments.		Removed by Purchasers.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur.....	1,195	6,112	1,075	3,941	7,22,682	8,94,598	1,63,317	1,65,205
Jacobabad	1,110	40	6,300	19,447	1,58,463	4,27,071	1,80,675	2,16,463
Naushahro	3,300	2,803	18,331	8,525	3,04,185	4,31,147	54,375	45,190
Hyderabad	1,64,560	1,60,982	7,263	11,207	3,35,966	3,84,724	37,684	35,242
Jerruck.....	11,151	9,297	1,14,268	1,62,230	1,19,161	1,70,288	23,059	5,114
Total.....	1,81,316	1,78,334	1,47,237	2,05,400	16,40,457	23,07,828	4,63,510	4,67,214

59. The total yield of charcoal of each Division is as under :—

Division.	Charcoal in Maunds.	
	1885-86.	1886-87.
Sukkur .....	.....	33
Jacobabad	1,653	2,736
Naushahro.....	1,939	3,675
Hyderabad.....	4,866	2,694
Jerruck	17,117	26,608
Total.....	25,575	35,746

60. The following is the total yield of the whole Circle during the year under report and the previous year :—

Timber.....	{ 1885-86	C. ft.	37,368
	{ 1886-87		46,943
Sleepers	{ 1885-86	No.	1,389
	{ 1886-87		2,388
Pasts	{ 1885-86	No.	17,988
	{ 1886-87		24,941
Rafters	{ 1885-86	No.	3,06,126
	{ 1886-87		2,93,633
Firewood.....	{ 1885-86	Mds.	23,50,846
	{ 1886-87		31,58,776
Charcoal	{ 1885-86	Mds.	25,575
	{ 1886-87		35,746

61. The realizations by the sale of farms for removal of Minor produce and the right of fishing in Forest waters are given below for each Division during the last two years :—

Division.	Babul pods.		Lac.		Munj reed and Sar grass.		Fishery.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
Sukkur.....	145	247	...	...	345	449	690	821
Jacobabad	...	...	...	...	71	134	105	444
Naushahro	1,229	2,037	...	...	244	312	96	390
Hyderabad	4,866	6,944	935	672	...	...	436	493
Jerruck	2,422	2,803	...	...	...	100	220	244
Total.....	8,662	11,031	935	672	660	995	1,517	2,392

62. The area under cereal cultivation in each Division and the amount realized by assessment is as under. The Rabi cultivation is nearly all fodder crops on fresh alluvial accretions to the forests raised by cattle-breeders and others living in or on the edge of the forests.

Division.	Area under cultivation.				Amount realized by assessment.			
	Kharif.		Rabi.		Kharif.		Rabi.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
Sukkur.....	529	525	2,150	1,859	1,223	1,275	6,121	6,356
Jacobabad	...	...	19	16	...	...	90	78
Naushahro	230	444	1,682	2,145	588	1,353	6,755	6,351
Hyderabad	336	287	583	1,074	867	720	1,507	3,175
Jerruck.....	306	1,137	158	350	787	3,055	317	682
Total.....	1,401	2,393	4,592	5,444	3,465	6,403	14,790	16,642

63. A comparative statement for two years of the realizations from grazing fees is given below for each Division :—

Division.	Grazing fees.	
	1885-86.	1886-87.
	Rs.	Rs.
Sukkur	12,510	11,741
Jacobabad	1,404	2,206
Naushahro.....	6,957	7,705
Hyderabad	13,839	13,611
Jerruck	10,954	10,604
Total.....	45,664	45,867

SECTION 5. EXPORT OF FOREST PRODUCE.

64. The Gun Carriage Factory in Bombay was supplied with 8,238 cubic feet of Babul timber. The export of firewood to Bombay and Katiawar ports was 43,746 Bengal maunds. The larger quantity of charcoal sold from the forests would show that its export is on the increase, but the figures showing the actual quantity of forest made charcoal exported cannot be given as delivery of the charcoal by the purchaser is taken in the forest and the general export includes charcoal made outside forest limits by private holders of forest land and by those who make charcoal of trees removed from canal banks.

65 Another attempt is being made to get Babul bark into the English Market.

CHAPTER V. FINANCIAL RESULTS.

66. A comparative statement of the total receipts and expenditure during the last two years is given below :—

	Actuals for 1885-86.	Actuals for 1886-87.	Increase.	Decrease.
	Rs.	Rs.	Rs.	
Receipts.....	5,36,874	6,85,782	1,48,908	...
Expenditure—				
A. Conservancy and works	2,96,893	4,04,090	1,07,197	...
B. Establishment	1,05,767	1,13,613	7,846	...
Total Expenditure.....	4,02,660	5,17,703	1,15,043	...
Net Revenue...	1,34,214	1,68,079	32,865	...

The revenue both gross and net is the largest ever made in the Sind Circle, but the expenditure as compared to receipts is far larger than in other Circles, but the reason for this is very easy to show. The chief product of the other two Circles is timber, an article valuable in itself, and it is either sold standing to the purchaser or is cut departmentally and sold on the edge of the forest so that the expenses of working the forests are reduced to a minimum. The chief product of the Sind forests is firewood for which there is practically no demand in the Forests; before it can be disposed of it has to be cut, carted or carried on pack-animals and boated from distances ranging from seven to over a hundred miles—forty being a very common distance for wood to be carried before it can be delivered at the place of consumption. Firewood moreover is cheaper in Sind than it is in any other district I know of in India—so that it is only by studying the convenience of large consumers and by strict economy in working charges and by most careful arrangements in placing the wood in suitable localities on the bank of the river, side-channels and canals, for boating during the different stages in the rise and fall of the river that it is possible to show a profit over working expenses. The Railway authorities only consent to burn it so long as they can get it at about half the price of its equivalent in coal and the Port Engineer has been careful to inform me that there is very little profit in the use of wood fuel over coal and rejected a very large quantity of wood as not *dry enough* that had been cut six months.

67. In reviewing last year's Forest Administration Reports Government took exception to the large expenditure in Sind as compared with net receipts. I would submit as I have already shown that a very large profit from forests worked chiefly for firewood is impossible, and that to get a revenue at all out of them in the absence of demand for firewood in the immediate neighbourhood of the forests a large expenditure is absolutely necessary for the carriage of the wood to places where sale can be found for it. Furthermore, in making comparisons of financial results some regard should be had to the area available as well as the quality of the forest materials which forms the source of revenue in each Circle. Taken in this way the comparison would be in favour of Sind—See figures for 1885-86.

	Area in Acres.	Net revenue.	Yield per acre.		
		Rs.			
Northern Circle...	51,39,029	3,73,657	0	1	2
Southern Circle...	32,47,682	10,69,528	0	5	1
Sind Circle.....	4,30,926	1,34,214	0	4	11

The revenue of the Southern Circle was extraordinarily high during this year owing to the local demand for sleepers, otherwise the net Sind revenue per acre would have been the largest, and would be so in ordinary years. That Sind with its wretched jungles can yield results that in any way compare with the Southern Circle with its magnificent Teak forests should entitle the Forest management to some small credit for the efforts made to extract a revenue from those jungles.

GENERAL REMARKS.

68. With the exception of the great damage done by forest fires in Upper Sind and the loss of area of good forest land in the same district by erosion, the season has been an uneventful though a prosperous one.

69. I began my tour in Lower Sind and extended it to the Kashmor Taluka in the Upper Sind Frontier Districts.

This taluka is very sparsely populated and the population is largely nomadic. All the part of it lying along the river to a depth of some 10 to 12 miles is practically a jungle with clearings in it. Much of the jungle is good Bhan forest and the greater part of the rest valuable as a source of fuel supply for the Sukkur Main Station. The distances are great, ranging from thirty-five to fifty-five miles, but as the wood has to be boated down river it is just possible to deliver it at Sukkur within the maximum rate the Department can afford to pay.

The District has not been surveyed and there are no village maps available. For this and other reasons forest demarcation is not at present feasible but there is a Protective Establishment consisting of a Forester and six Forest Guards who were placed some years ago in charge of the jungles in the taluka pending demarcation. By arrangement with the Deputy Commissioner this Establishment is to remain but its attention is to be confined to four villages and two Kachas on which all the principal forest is situated.

70. I was able to personally inspect the greater part of the area of every Division and can speak very highly of the excellent care taken of the forests and the absence of lopping by goatherds which used to be so common in the lately acquired Reserves.

71. I very thoroughly inspected a considerable part of the area in Upper Sind which came under the axe when the Department first began to supply the Railway with fuel. In the compartments that have not suffered from fire the reproduction is very satisfactory and in two or three years' time they will be ready to work again, but in others the growth has been once or often destroyed by fire and though the Kandi has coppiced again after each fire the progress of the compartments towards maturity has been much retarded.

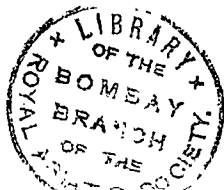
72. I inspected the books, accounts and records of all the Divisional Offices and found them in a satisfactory state.

73. All the Divisional Forest Officers have worked well and carried out their duties with zeal and intelligence.

*Conservator's Office,
Hyderabad,
10th September 1887.*

}

J. G. MACRAE, Lieut.-Colonel,
Conservator of Forests Sind Circle



ANNUAL FORM No. 49.

ANNUAL FORM No.
FOREST DEPARTMENT BOMBAY,
Area of Reserved

Division.	Civil District or Territory.	Name of Forest.	Area on 1st April 1886.		Added during the year.
			Acres.	Equivalent in square miles.	Acres.
Sukkur...	Shikarpur.	Rasti	8,129	13	...
		Jamshero	5,159	8	100
		Daresb.....	2,025	3	...
		Ubauro.....	3,150	5	...
		Mirpur.....	6,511	10	...
		Raharki.....	...	...	1,654
		Reti	...	...	2,388
		Rangu	...	...	972
		Narli	...	...	1,376
		Bohab	9,485	15	200
		Budh.....	1,217	2	...
		Sadhuja.....	14,099	22	500
		Shahpur.....	10,215	16	...
		Panwari.....	487	1	200
		Hussenbeli	3,407	5	...
		Azizpur	880	1	...
		Ding	1,518	2	...
		Ghotki	4,200	7	...
		Syedpur.....	7,647	12	...
		Rohri.....	8,302	13	...
		Kote Shahu	150	...	...
		Abad	5,579	9	150
		Kadirdini Bindi	2,306	4	...
		Khiabindi	3,118	5	200
		Shah.....	13,283	21	1,000
		Bindi Dhareja	6,954	11	700
		Kadrapur	2,485	4	...
		Total...	1,20,306	189	9,440

Hyderabad,
10th September 1887.

100	8,029	13
200	5,059	8
...	2,025	3
...	3,150	5
...	6,511	10
...	1,651	3
...	2,388	4
...	972	2
...	1,376	2
500	9,185	14
...	1,217	2
1,000	13,599	21
500	9,715	15
50	637	1
...	3,407	5
...	880	1
...	1,518	2
...	4,200	7
...	7,647	12
...	8,302	13
149	1	...
300	5,429	8
...	2,306	4
...	3,318	5
200	14,083	22
200	7,454	12
...	2,485	4
3,199	1,26,547	198

No. 6226 of 31st August 1886.

Lost by action of the river.

Gained and lost by do.

Do. Do. Do.

Do. Do. Do.

Lost by action of the river.

Gained and lost by do.

Do. Do. Do.

Gained by do. do.

Gained and lost by do.

Jacobabad.	Shikarpur- <i>continued.</i>	Andaidal	11,993	19	300
		Bagirji.....	13,920	22	500
		Raiswah.....	...	...	905
	Upper Sind Frontier.	Abad	1,127	2	...
		Mehrabpur.....	1,457	2	...
		Dilawarpur.....	1,439	2	...
		Milkiat Sircar.....	910	1	...
		Bakapur.....	8,359	13	...
		Dilmurad.....	1,055	2	...
		Zangipur	5,359	8	...
		Sarki	3,706	6	...
		Beluchabad	1,100	2	...
		Korar ..	887	1	...
		Total ..		51,312	80	1,705

50	12,242	19	Gained and lost by action of the river.		
...	14,420	23	Gained by do. do.		
...	905	1	No. 368 of 15th January 1887.		
...	1,127	2			
...	1,457	2			
...	1,439	2			
...	910	1			
...	8,359	13			
...	1,055	2			
...	5,359	8			
...	3,706	6			
...	1,100	2			
...	887	1			
50	52,967	82			

Naushahro.	Shikarpur.	Dosu	4,633	7	...
		Keti Ubhuro.....	5,575	9	...
		Kanuri	4,030	6	...
		Kasim Shah.....	2,107	3	...
		Nari.....	1,522	2	...
		Dangar	3,685	6	...
		Magsi.....	1,383	2	...
		Sharifpur	1,027	2	...
		Bahman.....	1,547	2	...
		Naoabad.....	2,205	3	...
		Phati Bilawal.....	711	1	...
	Hyderabad	Bhour.....	10,039	16	...
		Mohbat Dero.....	8,030	13	...
		Samtia.....	3,290	5	...
		Kamal Dero.....	1,365	2	...
		Bhorti	10,785	17	...
		Dalipota.....	867	1	...
		Khairo Dero.....	13,173	21	350
		Lalia.....	4,192	7	...
	Karachi.	Karampur	2,924	5	...
		Baghban	...	...	1,947
		Phaka.....	...	...	2,207
		Pipri	...	...	925
		Bhan	...	...	1,138
		Kalubori.....	...	...	748
	Total...		83,090	130	7,315

...	4,633	7			
...	5,575	9			
...	4,030	6			
...	2,107	3			
...	1,522	2			
...	3,685	6			
...	1,383	2			
...	1,027	2			
...	1,547	2			
...	2,205	3			
...	711	1			
200	9,839	15		Lest by action of the river.	
250	7,780	12		Do.	Do. Do.
...	3,290	5			
...	1,365	2			
285	10,500	16		Do.	Do. Do.
...	867	1			
...	13,523	21		Gained by	do. do.
30	4,162	7		Lest by	do. do.
20	2,904	5		Do.	Do. Do.
...	1,947	3	} No. 2967 of 19th April 1886.		
...	2,207	3			
...	925	1			
...	1,138	2	} No. 6453 of 13th Sept. 1886.		
...	748	1			
785	89,620	137			

Hyderabad.	Hyderabad {	Lakhat	6,130	10	...
		Nasri.....	1,756	3	500
		Mad	2,692	4	...
		Mahrabpur.....	3,838	6	100
		Mari.....	15,203	24	600
		Pai.....	5,130	8	...
		Keti Jurio.....	2,025	3	...
		Rano.....	1,627	3	...
		Nurketi.....	3,418	5	...
		Kacho Nurketi.....	3,641	6	...
		Bhanote.....	841	1	...
		Khanote.....	8,666	14	300
		Khebrani.....	760	1	...
		Sekhat.....	2,067	3	...
		Jakhri	1,926	3	...
		Matiani.....	5,354	8	...
		Ghali	3,041	5	1,000
		Miani.....	4,917	8	...
		Kathri	756	1	...
		Gundi.....	2,150	3	...
		Muhammad Khan.....	181	...	...
		Jam Shoro.....	292	...	...
		Shah Makai.....	411	1	...
		Keti Mahrani.....	5,523	9	...
		Gidarji	...	...	855
		Butho.....	7,848	12	...
		Manjhand	1,539	2	...
	Karachi {	Unarpur.....	10,427	16	...
		Messa.....	...	...	308
		Ghagh	1,296	2	...
		Karokho	1,701	3	...
		Total...	1,05,156	164	3,663

...	6,130	10			
...	2,256	4			Gained by action of the river.
...	2,692	4			
...	3,938	6		Do.	Do. Do.
...	15,803	25		Do.	Do. Do.
...	5,130	8			
...	2,025	3			
...	1,627	3			
...	3,418	5			
...	3,641	6			
...	841	1			
...	8,966	14		Do.	Do. Do.
...	760	1			
...	2,067	3			
...	1,926	3			
...	5,354	8			
...	4,041	6		Do.	Do. Do.
...	4,917	8			
...	756	1			
...	2,150	3			
...	181	...			
...	292	...			
...	411	1			
20	5,503	9		Lost by	do. do.
...	855	1	No. 3241 of 3rd May 1886.		
...	7,848	12			
...	1,539	2			
66	10,361	16		Do.	Do. Do.
...	308	...	No. 8903 of 21st December 1886.		
...	1,296	2			
...	1,701	3			
86	1,08,733	168			

Jerruck.	Karachi— continued.	Viran.....	8,942	14	...
		Sonda.....	2,114	3	...
		Hilaya.....	2,898	5	...
		Lalang.....	5,051	8	50
		Shah Lanko.....	1,690	3	...
		Garko.....	4,079	6	...
		Penah.....	6,169	10	...
		Susati	39	...	...
		Khirsar	1,380	2	...
		Huderani.....	5,511	9	...
		Surjani.....	1,387	2	...
		Ganj	2,153	3	...
		Hazari	2,483	4	...
		Makbulo	496	1	...
	Hyderabad	Laikpur.....	7,406	12	...
		Khadi	4,300	7	...
		Phatab.....	233	...	100
		Mulchand	5,454	9	...
		Malir	24	...	...
		Husri.....	420	1	...
		Khatro.....	416	1	...
		Khathar.....	2,935	5	40
		Katlar	952	1	...
		Khirdahi	290	...	...
		Tikhrur.....	1,709	3	...
		Khokhar.....	1,556	2	...
		Bud-ka-Takar.....	975	2	...
Total...		71,062	113	190	

SIND CIRCLE.

Forests, 1886-87.

Excluded or trans- ferred to other heads.	Area on 31st March 1887.		No. and date of Notification of addition or transfer.	REMARKS.
	Acres.	Equivalent in square miles.		
580	8,362	13		Lost by action of the river.
...	2,114	3		
...	2,898	5		
200	4,901	8		Gained and lost by do.
...	1,690	3		
...	4,079	6		
...	6,169	10		
...	39	...		
...	1,380	2		
...	5,511	9		
...	1,387	2		
300	1,853	3		
...	2,483	4		
...	496	1		
...	7,406	12		
250	4,050	6		Lost by do. do.
20	313	...		Gained and lost by do.
...	5,454	9		
...	24	...		
...	420	1		
...	416	1		
...	2,975	5	No. 7535 of 25th October 1886.	
...	952	1		
...	290	...		
...	1,709	3		
...	1,556	2		
...	975	2		
1,350	69,902	111		

J. G. MACRAE, Lieut.-Colonel,
Conservator of Forests, Sind Circle.

FORM No. 50.

FOREST DEPARTMENT, BOMBAY, SIND CIRCLE.

Prosecution for breaches of Forest Rules during 1886-87.

	Cases pending from 1886-87.	NEW CASES OF THE YEAR.						Total cases.	DISPOSED OF DURING THE YEAR.						Cases pending at close of year.
		Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.	Convictions.		Acquittals.		Total.				
							Cases.		Persons.	Cases.	Persons.	Cases.	Persons.		
Forest Division and Civil District.	...	14	...	...	...	14	9	14	5	5	14	19	...	...	
Upper Sind Frontier District.															
Jacobabad Division	7	3	...	1	4	11	4	5	7	7	11	12	...	3	
Sukkur	8	10	5	4	20	28	12	17	13	18	25	34	...	...	
Naushahro	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Hyderabad District.															
Naushahro Division	6	3	...	...	3	9	8	11	...	...	8	11	...	1	
Hyderabad	...	10	...	1	11	11	10	22	1	1	11	23	...	...	
Jerruck	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Karachi District.															
Naushahro Division	...	1	...	...	1	1	1	2	...	...	1	2	...	...	
Hyderabad	...	4	...	...	...	4	2	5	2	3	4	8	...	...	
Jerruck	3	1	...	...	...	4	1	3	3	23	4	26	...	...	
Total...	24	46	5	6	58	82	47	79	31	57	78	136	...	4	

J. G. MACRAE, Lieut.-Colonel,
Conservator of Forests, Sind Circle.

Hyderabad, 10th September 1887. }

ANNUAL FORM No. 51.

FORM No. 51.

FOREST DEPARTMENT, SIND CIRCLE.

Area of Forest Tracts protected from fire during the dry season 1887, to accompany Report for 1886-87.

Division.	Forest Tracts.	Year in which commenced.	Area actually protected up to 15th June 1886.	During dry season for 1887.			Cost during the season.	Remarks.
				Area attempted to be protected.	Failures.	Area actually protected.		
Sukkur	Mirpur	Not known.	24,429	31,164	2,384	28,780	Rupees.	As all the Forests are equally protected against fire, the entire area of the Sind Forests has been given in column "area" attempted to be protected.
	Ghotki		3,660	4,200	400	3,800		
	Sadhuja.....		55,595	56,107	8,204	47,903		
	Abad.....		33,475	35,076	41	35,035		
Jacobabad	Nausahro	Not known.	25,720	27,568	90	27,478	Rupees.	
	Jacobabad.....		13,290	13,292	.....	13,292		
	Thul		12,107	12,107	.....	12,107		
Nausahro	Kandiaro	Not known.	33,964	33,641	390	33,251	Rupees.	
	Schwan.....		20,111	27,554	16	27,538		
	Bakrani.....		19,728	19,728	476	19,252		
	Tigr		8,697	8,697	.....	8,697		

Hyderabad	Rano	46,101	47,501	335	47,166
	Miani	29,803	31,118	224	30,894
	Hyderabad	703	703	.....	703
	Kotri	7,224	7,204	.....	7,204
	Unarpur	21,080	22,207	20	22,187
Jerruck.....	Viran	24,774	24,044	.....	24,044
	Shahbandar	36,978	36,541	153	36,388
	Katiar	9,253	9,293	.....	9,293
	Karachi.....	24	24	.....	24
	1882-83.				
	Total.....	4,26,736	4,47,769	12,733	4,35,036

Not known.

Conservator Office,

Hyderabad, 15th September 1887.

J. G. MacRAE, Lieut-Colonel,

Conservator of Forests, Sind Circle.

ANNUAL FORM No. 52.

FOREST DEPARTMENT, BOMBAY, SIND CIRCLE.

Area of Plantations, 1886-87.

Division.	Name of Plantation.	Area in Acres.			Receipts	Charges	Remarks.
		On 1st April 1886.	Added during the year.	Excluded during the year.			
	<i>Regular Plantations.</i>						
Sukkur	Aliwahan Garden	20	...	...	...	84	
	Rahuja Nursery	10	...	...	351	747	
	Sadhuja Plantation	70	10	...	...	508	
	Shah Plantation	...	7	...	...	190	
Hyderabad	<i>Divi-Divi</i> Plantation	13	...	...	...	278	
	Bambu Plantation	13	...	...	...	358	
	Miani Bungalow, Mango and Monument Gardens	12	...	...	...	760	
	Malir Nursery	24	...	...	100	168	
Jerruck	Sonda "	5	...	...	254	551	
	Total	167	17	...	705	3,614	
	<i>Cultural operations.</i>						
Sukkur	Bahab	100	...	100	...	...	100 acres were opened to grazing, the growth attained such dimension as not to require any protection.
	Shahpur	410	...	410	...	...	410 acres Do. do. do.
	Ding	10	35	10	...	32	10 acres Do. do. do.
	Abad	50	10	50	...	108	50 acres Do. do. do.
	Bindi Dhareja	50	27	50	...	48	50 acres Do. do. do.
	Sadhuja	...	40	...	...	93	

Rohri	...	25	...	25	...	60
Syedpur	...	5	...	5	...	54
Chanjni	...	5	...	5	...	30
Saliani	...	20	...	20	...	52
Adilpur	...	35	...	35	...	100
Total...	620	202	620	202	...	577
Kamal Dero	500	...	500	...	...	500 acres opened to grazing.
Bhour	713	24	713	24	...	713 acres do. do.
Samtia	150	...	150	...	...	150 acres do. do.
Mohbat Dero	30	750	80	700	...	30 acres do. do.
Bhorti	200	290	200	290	...	50 acres killed by frost.
Dalipota	50	68	118	...	...	230 acres opened to grazing.
Khairo Dero	310	...	310	...	...	50 acres do. do.
Lalia	150	...	150	...	...	60 acres killed by frost.
Karampur	15	25	15	25	...	310 opened to grazing.
Keti Lalia	15	25	15	25	...	150 acres do. do.
Sharifpur	...	45	...	45	...	15 acres do. do.
Total...	2,133	1,227	2,251	1,109	...	...

Naushahro

Hyderabad	Lakhat	12	...	...	12	...	...	...
	Nasri	265	...	...	265	...	...	...
	Mahrabbpur	186	...	...	216	...	...	...
	Mari	2,080	30	...	2,720	...	...	...
	Keti Jurio	...	640	...	640	...	...	...
	Nurketi	480	640	...	1,120	...	...	...
	Khanote	220	640	...	220	...	...	...
	Jakhri	140	...	...	140	...	...	...
	Matari	2,000	...	...	2,000	...	...	...
	Miani	2,598	...	...	2,598	...	...	...
	Muhammad Khan	181	...	...	181	...	...	...
	Shah Makai	43	...	...	43	...	...	...
	Jamshoro	23	...	...	23	...	...	...
	Butto	1,280	...	...	1,280	...	...	...
	Manjhand	108	...	...	108	...	...	...
	Unarpur	3,150	...	...	3,150	...	...	...
	Total...	12,766	1,950	...	14,716	...	...	...
Jerruck	Mulchand	144	70	...	214	...	...	...
	Khadi	901	1,020	...	1,921	...	...	...
	Penah	13	...	...	13	...	...	...
	Ganj	15	...	...	15	...	...	...
	Laikpur	160	160	160	160	...	...	...

Opened to grazing under the
new plan of operation.

Viran	655	80	...	735	...	...
Garko	436	...	...	436	...	...
Shah Lanko	100	...	...	100	...	...
Hilaya	100	65	...	165	...	...
Sonda	...	55	...	55	...	...
Tikhur	8	...	8	...	...	...
Khathar	260	245	...	505	...	...
Katiar	...	12	...	12	...	...
Bud-ka-Takar	...	82	...	82	...	...
Total...	2,792	1,789	168	4,413	...	...
Total Regular Plantations	167	17	...	184		
Total Cultural Operations...	18,311	5,168	3,039	20,440		

Opened to grazing.

Conservator's Office,
Hyderabad,
10th September 1887,

J. G. MacRAE, Lieut.-Colonel,
Conservator of Forests, Sind Circle,

[illegible]

Naushahro—continued.....	928 C. ft. removed out of last year's out- turn. 3,742 C. ft.										Do.	Do.	Do.
	...	...	...	...	...	...	...	...	...	...			
Bahan posts	134	...	...	134	1,062	...	...	...	...	...	...	...	...
Bahan rafters	1,925	...	...	1,925	5,667	...	...	...	...	...	...	...	...
Kirir posts	...	2,201	...	2,201	400	1,801	...	...	...	...	...	...	...
Jhau posts	...	6,523	...	6,523	4,688	1,120	...	...	...	...	...	...	...
Firewood	...	4,40,708	...	4,40,708	1,31,369	3,05,033	...	...	...	...	...	...	...
Loco. fuel	...	21,74,262	...	21,74,262	21,15,065	...	...	...	...	...	...	...	...
Charcoal	...	21,930	...	21,930	18,375	...	...	...	...	...	...	...	...
Total...	6,227	26,45,624	...	26,51,851	22,78,983	3,10,419	777	...	...	...	...	...	...
Hyderabad.....													
Babul logs.....	15,537	...	...	15,537	24,659	848	1,269	...	...	...	Do.	Do.	Do.
Bahan logs	79	...	...	79	...	79	...	...	...	...	Do.	Do.	Do.
Babul bolsters	1,575	...	...	1,575	2,943	...	...	...	...	...	Do.	Do.	Do.
Babul rafters	...	...	...	...	68	...	...	...	...	...	Do.	Do.	Do.
Babul posts	...	216	...	...	99	...	...	...	...	...	...	...	...
Bahan posts	3,689	...	...	3,689	2,858	372	...	...	...	...	...	...	...
Bahan rafters	90,605	...	...	90,605	52,920	2,480	1,100	...	...	...	...	...	...
Kirir rafters	...	150	...	150	...	150	...	...	...	...	...	...	...
Jhau posts.....	...	3	...	3	713	...	...	...	...	...	...	...	...
Jhau rafters	...	1,981	...	1,981	...	1,531	750	...	...	...	Do.	Do.	Do.
Jhau bairs.....	...	35	...	35	...	35	...	...	...	...	Do.	Do.	Do.
Babul brake blocks	1,495	...	...	1,495	1,495	...	...	...	...	...	...	...	...
Babul slabs	553	...	...	553	882	...	...	...	...	...	...	...	...
Babul sleepers	6,430	...	...	6,430	5,436	...	...	...	...	...	Do.	Do.	Do.

FORM No. 55.

FOREST DEPARTMENT, SIND CIRCLE.

Outturn of Minor Forest Produce.

Division,	Description of produce.	Produce removed or utilized.										Remarks.
		By Government agency.		By Purchasers.		By free grants.		By right holders.		Total.		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
Sukkur	RESERVED FORESTS.		Rs.		Rs.		Rs.		Rs.		Rs.	
	Brushwood .....	.....	.....	3,819	244	374	24	.....	.....	4,193	288	
	Kanh grass .....	.....	.....	141	10	353	22	.....	.....	494	32	
	Grass .....	.....	.....	2,178	136	.....	.....	.....	.....	2,178	136	
	Reed .....	.....	.....	Contract ..	449	.....	.....	.....	.....	.....	449	
	Babul pods .....	.....	.....	Do. 5	247	.....	.....	.....	.....	.....	247	
	Tooth brushes .....	.....	.....	.....	5	.....	.....	.....	.....	.....	5	
	Grazing fees .....	.....	.....	.....	11,741	.....	.....	.....	.....	.....	11,741	
	Vegetable and fruit.....	.....	351	.....	.....	.....	.....	.....	.....	.....	351	
	Total .....	.....	351	6,143	12,832	727	46	.....	.....	6,870	13,229	
Jacobabad	Kanh grass .....	.....	.....	154	10	.....	.....	.....	.....	154	10	
	Brush wood .....	.....	.....	910	57	.....	.....	.....	.....	910	57	
	Reed .....	.....	.....	Contract ..	134	.....	.....	.....	.....	.....	134	
	Grazing fees .....	.....	.....	.....	2,207	.....	.....	.....	.....	.....	2,207	
	Babul bark .....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	
	Chabbar grass .....	.....	.....	15	1	.....	.....	.....	.....	15	1	
	Total.....	.....	.....	1,083	2,410	.....	.....	.....	.....	1,083	2,410	
Naushahro	Babul pods .....	.....	.....	Contract ..	2,037	.....	.....	.....	.....	.....	2,037	
	Sar grass .....	.....	.....	Do.	312	.....	.....	.....	.....	.....	312	

ANNUAL FORM 56.

FOREST DEPARTMENT.

Account of Timber and other Produce cut or collected by Government agency and brought to Sale Depôts or sold locally during the year 1886-87-

Particulars.	Number or quantity.	Cubic feet.	Total of each head.		Particulars.	Number or quantity.	Cubic feet	Total of each head.	
			No. or quantity.	Cubic feet.				No. or quantity.	Cubic feet.
TIMBER.									
Balance at commencement of the year.									
Sale Depot.									
Babul logs	92	1,033	.....	.....	Babul logs	1,893	26,321	.....	.....
Bahan logs	74	409	.....	.....	Bahan logs	252	1,859	.....	.....
Tali logs	37	147	.....	.....	Tali logs	14	66	.....	.....
Tali planks	23	8	.....	.....	Kandi logs	1	3	.....	.....
Babul posts	1	.....	.....	.....	Deodar logs	2	108	.....	.....
Bahan posts	83	.....	.....	.....	Tali planks	23	14	.....	.....
Bahan rafters	661	.....	.....	.....	Babul brake blocks	2,990	.....	.....	.....
Babul cart axles	2,095	.....	.....	.....	Babul planks	52	.....	.....	.....
Babul sleepers	17	.....	.....	.....	Babul rafters	821	.....	.....	.....
Babul pieces	4	.....	3,087	1,597	Babul cart axles	2,092	.....	.....	.....
Forest Depots.									
Bahan logs	1	5	.....	.....	Babul posts	1,567	3,611	.....	.....
Babul logs	3	13	.....	.....	Babul bolsters	765	.....	.....	.....
Bahan sleepers	12	.....	.....	.....	Babul pieces	77	.....	.....	.....
Sale Depot.									
Bahan posts	120	.....	.....	.....	Babul outer slabs	737	.....	.....	.....
Bahan rafters	200	.....	.....	.....	Babul sleepers	1,360	.....	.....	.....
Forest Depots.									
Babul logs	2	14	.....	.....	Bahan Dasas	47	173	.....	.....
Deodar logs	1	.....	.....	.....	Bahan posts	17,430	.....	.....	.....
Sold locally.									
Babul logs	944	.....	.....	.....	Bahan rafters	1,49,988	.....	.....	.....
Do.	20	.....	.....	.....	Jhau posts	1,150	.....	.....	.....
Bahan logs	84	.....	.....	.....	1,81,261		32,155		.....
Kandi logs	101				5,735		468		
Deodar log	1								

Division.

Sukkur

Jacobabad Division.

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<i>Received in Forest Depots.</i>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
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FORM No. 57.

FOREST DEPARTMENT, SIND CIRCLE.

Abstract showing the Value of Timber and other Produce at Sale Depôts for the year 1886-87.

Description of Timber and other produce.		On hand at com- mencement of the year.		On hand at close of the year.			Difference in Value.		
		No.	Cubic feet.	Value.	No.	Cubic feet.	Value.	In favor of the year.	Against the year.
<i>Sale Depôts.</i>									
Babul logs	92	1,033	516	307	3,228	1,614	...	...	
Bahan „	74	409	204	211	1,180	590	...	...	
Tali „	37	147	110	57	287	215	...	...	
Tali planks	23	8	6	...	...	...	...	...	
Babul posts	1	...	...	16	...	6	...	...	
Bahan „	83	...	34	4,559	...	1,824	...	...	
Do. rafters	661	...	66	17,623	...	2,115	...	...	
Babul cart axles ...	2,095	...	210	507	...	81	...	...	
Do. pieces	4	...	2	...	...	...	...	...	
Do. sleepers	17	...	34	...	...	...	...	...	
Tali pieces	...	...	...	37	...	18	...	...	
Bahan dasas	...	...	...	8	13	6	...	...	
Jhau rafters	...	...	...	10	...	1	...	...	
Total Timber...	3,087	1,597	1,182	23,335	4,708	6,470	5,288	...	
Sukkur Division.	Babul logs	3	13	3	3	13	3	...	...
	Bahan „	1	5	1	...	...	...	...	...
	Do. sleepers	12	...	12	...	...	...	...	...
	Babul sleepers	...	...	...	290	...	203	...	...
	Bahan posts	...	...	...	100	...	10	...	...
	Do. rafters	...	...	...	6,060	...	606	...	...
	Jhau do.	...	...	...	1,014	...	20	...	...
	Total Timber...	16	18	16	7,467	13	842	826	...
Firewood Mds....	71,451	...	12,861	64,495	...	11,609	...	...	
Babul bark „ ...	6	...	3	6	...	3	...	...	
Locomotive fuel.....	...	...	...	...	11,227	674	...	...	
Total Firewood...	71,457	...	12,864	64,501	11,227	12,286	...	578	
<i>Forest Depôts.</i>									
Firewood Mds....	50	...	5	1,725	...	311	...	...	
Locomotive fuel.....	...	5,35,375	22,260	...	1,37,803	5,789	...	...	
Total Firewood...	50	5,35,375	22,265	1,725	1,37,803	6,100	...	16,165	

Description of Timber and other produce.		On hand at commence- ment of the year.			On hand at close of the year.			Difference in Value.	
		No.	Cubic feet.	Value.	No.	Cubic feet.	Value.	In favor of the year.	Against the year.
Jacobabad Division.		<i>Sale Depôts.</i>							
		Bahan posts	120	...	40	...	...	...	...
		Do. rafters	200	...	24	...	...	...	...
		Total Timber...	320	...	64	...	...	...	64
		<i>Forest Depôts.</i>							
Naushahro Division.		Babul logs	2	14	2	...	...	...	...
		Deodar „	1	...	1	...	...	...	...
		Bahan rafters	...	...	...	2,500	...	300	...
		Total Timber...	3	14	3	2,500	...	300	297
		<i>Sale Depôts.</i>							
		Firewood Mds.	40	...	8	...	...	...	...
		Total firewood...	40	...	8	...	...	...	8
		<i>Forest Depôts.</i>							
		Firewood Mds.	400	...	72	...	...	...	...
		Locomotive fuel.....	...	2,51,777	6,294	...	37,975	1,208	...
		Total firewood...	400	2,51,777	6,366	...	37,975	1,208	5,158
Naushahro Division.		<i>Sale Depôts.</i>							
		Bahan logs	78	642	181	50	438	110	...
		Do. posts	1,592	...	177	95	...	15	...
		Do. rafters	7,501	...	750	17	...	1	...
		Babul sleepers	...	...	...	54	...	89	...
		Jhau rafters	...	...	...	1,000	...	35	...
		Total Timber...	9,171	642	1,108	1,216	438	250	858
		<i>Forest Depôts.</i>							
		Bahan logs	30	...	2	7	...	1	...
		Babul do.	88	...	11	86	...	10	...
		Kandi do.	4	8	1	...	...	...	...
		Total Timber...	122	8	14	93	...	11	3
Naushahro Division.		<i>Sale Depôts.</i>							
		Firewood Mds.	...	...	...	7,197	...	1,439	...
		Total...	...	...	...	7,197	...	1,439	...

Description of Timber and other produce.		On hand at commence- ment of the year.			On hand at close of the year.			Difference in Value.	
		No.	Cubic feet.	Value.	No.	Cubic feet.	Value.	In favor of the year.	Against the year.
Naushahro Division.	<i>Forest Depôts.</i>								
	Firewood Mds...	18,167	...	1,709	9,021	...	912	...	...
	Locomotive fuel.....	...	2,14,478	8,144	...	2,73,675	9,499	...	...
	Charcoal Mds...	...	...	...	711	...	284	...	...
	Babul seed „ ...	14	...	21	...	...	...	...	...
	Total...	18,181	2,14,478	9,874	9,732	2,73,675	10,695	821	...
	<i>Sale Depôts.</i>								
	Babul logs	1,030	12,944	7,686	50	691	519	...	...
	Do.	1	...	10	...	...	...	...	...
	Babul bolsters.....	207	975	964	175	824	603	...	...
Hyderabad Division.	Do. rafters	151	...	39	...	...	...	...	...
	Do. outer slabs ...	728	...	167	2	...	1	...	...
	Do. planks	20	...	10	5	...	3	...	...
	Do. posts	160	...	17	...	...	...	...	...
	Bahan „	9	...	2	750	...	300	...	...
	Do. rafters	1,020	...	100	69,370	...	7,632	...	...
	Jhan posts	1,145	...	115	...	...	...	...	...
	Babul sleepers.....	...	...	...	286	...	644	...	...
	Kirir knees	...	...	...	50	...	3	...	...
	Total...	4,471	13,919	9,110	70,688	1,515	9,705	595	...
	<i>Forest Depôts.</i>								
	Babul logs	301	1,425	356	26	125	26	...	...
	Do.	6	...	3	6	...	3	...	...
	Do. sleepers	10	...	10	8	...	18	...	...
	Do. outer slabs ...	200	...	20	200	...	20	...	...
	Do. planks	5	1	...	...	...	...	...	...
	Bahan rafters	140	...	7	...	...	...	...	...
	Total...	662	1,426	396	240	125	67	...	329
	<i>Sale Depôts.</i>								
	Firewood Mds...	9,486	...	1,707	28,654	...	5,158	...	...
	Charcoal „ ...	295	...	175	6	...	3	...	...
	Babul seed „ ...	...	...	...	139	...	69	...	...
	Total...	9,781	...	1,882	28,799	...	5,230	3,348	...
	<i>Forest Depôts.</i>								
	Firewood Mds...	18,799	...	1,880	9,805	...	981	...	...
	Charcoal „ ...	...	...	...	...	...	...	...	...
	Locomotive fuel.....	...	46,250	1,017	...	5,250	115	...	...
	Total...	18,799	46,250	2,897	9,805	5,250	1,096	...	1,801

Description of Timber and other produce.	On hand at commence- ment of the year.			On hand at close of the year.			Difference in Value.	
	No.	Cubic feet.	Value.	No.	Cubic feet.	Value.	In favor of the year.	Against the year.
<i>Sale Depôts.</i>								
Babul logs	218	2,515	2,043	183	2,095	1,309	...	...
Do. posts	1,858	...	240	1,438	...	144	...	...
Jhau do.	271	...	33	271	...	33	...	...
Do. rafters	13	...	1	13	...	1	...	...
Total...	2,360	2,515	2,317	1,905	2,095	1,487	...	830
<i>Forest Depôts.</i>								
Babul logs	144	1,008	262	417	985	123	...	...
Bahan posts	200	...	10	200	...	10	...	...
Babul slabs	535	...	100	...	...	...	...	...
Total...	879	1,008	372	617	985	133	...	239
<i>Sale Depôts.</i>								
Firewood Mds....	8,059	...	1,612	188	...	34	...	...
Charcoal „ ...	316	...	160	93	...	47	...	...
Locomotive fuel.....	...	1,989	368	...	...	...	...	...
Babul seed Mds...	...	...	...	3	...	2	...	...
Total...	8,375	1,989	2,140	284	...	83	...	2,057
<i>Forest Depôts.</i>								
Firewood Mds.....	39,658	...	4,760	34,574	...	4,149	...	...
Charcoal „	3,904	...	1,365	3,221	...	1,160	...	...
Locomotive fuel.....	...	1,13,190	4,040	...	1,49,185	3,714	...	...
Babul seed Mds...	...	...	...	1,000	...	500	...	...
Total...	43,562	1,13,190	10,165	38,795	1,49,185	9,523	...	642

Net Difference against the year Rs. 16,118.

Conservator's Office,
Hyderabad, 10th September 1887. }

J. G. MACRAE, Lieut.-Colonel,
Conservator of Forest, Sind Circle.

ANNUAL FORM

Summary of Revenue and Expenditure of the different Divisions

BUDGET HEADS.	Direction.	Hyderabad Division.
REVENUE.		
I. Timber and other Produce removed from the Forests by Government Agency—		
<i>a.</i> Timber	...	34,066 14 11
<i>b.</i> Firewood and Charcoal	...	87,098 5 8
<i>c.</i> Bamboos	...	...
<i>d.</i> Sandalwood	...	...
<i>e.</i> Grass and other minor produce	...	668 13 3
II. Timber and other Produce removed from the Forests by Consumers or Purchasers—		
<i>a.</i> Timber	...	526 3 3
<i>b.</i> Firewood and Charcoal	...	2,366 15 1
<i>c.</i> Bamboos	...	...
<i>d.</i> Grazing and fodder grass	...	13,610 12 0
<i>e.</i> Other minor produce	...	7,844 14 9
III. Confiscated, Drift and Waif Wood	...	1 0 0
IV. Revenue from Forests not managed by Government—		
<i>a.</i> Duty on Foreign Timber and other forest produce	...	...
<i>b.</i> Revenue from shared and private forests	...	...
V. Miscellaneous—		
<i>a.</i> Fines and forfeitures	...	4 0 0
<i>b.</i> Refunds	...	647 8 0
<i>c.</i> Other sources	...	5,054 10 2
Total Revenue.....	...	1,51,890 1 1
EXPENDITURE.		
A. CONSERVANCY AND WORKS.		
I. Timber and other Produce removed from the Forests by Government Agency—		
<i>a.</i> Timber	...	12,329 0 6
<i>b.</i> Firewood and Charcoal	...	61,947 7 6
<i>c.</i> Bamboos	...	...
<i>d.</i> Sandalwood	...	...
<i>e.</i> Grass and other minor produce	...	615 10 7
II. Timber and other Produce removed from the Forests by Consumers or Purchasers	...	1 6 0
III. Confiscated, Drift and Waif Wood	...	...
IV. Revenue from Forests not managed by Government—		
<i>a.</i> Duty on Foreign Timber and other forest produce	...	...
<i>b.</i> Revenue from shared and private forests	...	...
V. Rent of Leased Forests and Payments to Shareholders in Forests managed by Government	...	...

No. 58.

during the year 1886-87.

Jerruck Division.	Jacobabad Division.	Naushahro Division.	Sukkur Division.	Total.
17,251 10 2	4,057 5 1	2,047 9 0	12,243 14 3	69,667 5 5
65,448 0 11	81,991 11 8	84,221 8 9	1,71,632 12 10	4,90,392 7 10
...	...	...	...	...
...	...	...	...	...
6 13 0	...	16 8 6	351 3 5	1,043 6 2
589 7 6	1,723 0 5	405 7 5	2,517 12 11	5,761 15 6
343 9 11	14,242 7 7	2,775 14 0	10,948 10 0	30,677 8 7
...	...	...	...	...
10,603 12 0	2,206 8 0	7,705 9 0	11,740 13 3	45,867 6 3
3,128 10 5	202 11 0	2,400 6 11	1,090 13 6	14,667 8 7
...	19 4 0	4 12 0	105 10 3	130 10 3
...	...	...	...	...
...	...	...	...	...
27 0 0	...	0 8 0	359 3 1	390 11 1
...	27 14 11	...	437 7 7	1,112 14 6
3,890 9 1	522 2 8	7,775 15 4	8,826 14 7	26,070 3 10
1,01,289 9 0	1,04,993 1 4	1,07,354 2 11	2,20,255 3 8	6,85,782 2 0
11,000 2 5	1,561 14 9	1,150 12 10	6,285 2 2	32,327 0 8
42,588 15 8	61,772 2 7	63,997 7 0	1,21,709 7 4	3,52,015 8 1
...	...	...	...	...
...	...	...	...	...
379 9 0	...	6 14 6	1 0 0	1,003 2 1
4 6 0	0 14 0	3 9 0	...	10 3 0
...	...	...	3 10 0	3 10 0
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...

Summary of Revenue and Expenditure of the different Divisions

BUDGET HEADS.	Direction.	Hyderabad Division.
EXPENDITURE—(continued).		
VI. Live Stock, Stores, Tools and Plant—		
a. Purchase of Cattle	...	...
b. Feed and keep of Cattle	...	119 0 0
c. Stores, Tools and Plant	4 6 5	1,369 0 1
VII. Communications and Buildings—		
a. Roads and Bridges	...	...
b. Buildings	...	199 8 4
c. Other Works... ..	...	...
VIII. Demarcation, Improvement and Extension of Forests—		
a. Demarcation... ..	...	...
b. Compensation for Land and Rights	...	...
c. Surveys and Working Plans	...	166 12 0
d. Plantations	...	1,550 4 3
e. Protection from Fire	...	...
f. Other Works... ..	...	1,142 13 0
IX. Miscellaneous—		
a. Refunds	...	...
b. Law Charges	...	...
c. Other Charges	...	1 8 0
Total A. Conservancy and Works.....	4 6 5	79,442 6 3
B. ESTABLISHMENTS.		
I. Salaries—		
a. Conservators... ..	12,532 4 2	...
b. Superior Officers	106 14 11	10,885 0 0
c. Subordinate Forest and Depôt Establishments	...	9,115 3 0
d. Office Establishments	3,874 6 11	1,544 10 0
e. Deputation and Special Allowances	202 0 0	...
II. Travelling Allowances—		
a. Conservators... ..	2,400 0 0	...
b. Superior Officers	75 7 9	1,420 0 0
c. Subordinate Forest and Depôt Establishments	...	871 13 6
d. Office Establishments	849 15 10	540 0 0
III. Contingencies—		
a. Stationery	6 0 9	78 11 6
b. Carriage of Tents and Records	173 4 0	105 12 0
c. Rents, Rates and Taxes	300 0 0	240 0 0
d. Pay of Police Guards	...	...
e. Official Postage	160 13 0	81 1 6
f. Sundries	134 0 6	159 10 9
Total B. Establishments.....	20,815 3 10	25,041 14 3
Grand Total of Expenditure.....	20,819 10 3	1,04,484 4 6

No. 58.

during the year 1886-87.

Jerruck Division.	Jacobabad Division.	Naushahro Division.	Sukkur Division.	Total.
10 8 0 53 9 10 9 8 0	 12 0 0	 2 5 0	51 0 0 132 5 6 136 9 10	61 8 0 304 15 4 1,533 13 4
... 25 2 0 12 0 0	... 75 5 0 ...	... 27 8 0 ...	... 455 9 0 ...	... 783 0 4 12 0 0
2,298 15 2 ... 1,712 0 8 1,007 8 11 ... 434 4 0	1,360 15 0 ... 71 8 0 15 12 0 ... 154 9 3	1,166 7 1 36 0 0 162 0 0 1,027 4 2	73 7 0 ... 1,094 9 4 2,106 3 3 7 10 0 424 5 5	4,899 12 3 36 0 0 3,206 14 0 5,707 0 7 7 10 0 2,155 15 8
... ... 3 9 0	 13 4 9	... ... ...	... ... 3 8 0	 21 13 9
59,540 2 8	65,038 5 4	67,580 3 7	1,32,484 6 10	4,04,089 15 1
... 10,200 0 1 6,577 14 6 1,360 3 7 ...	... 1,620 0 0 7,584 4 5 1,255 2 10 ...	... 3,323 1 0 6,550 14 10 1,322 8 0 ...	... 2,677 1 2 9,500 9 3 1,592 2 7 ...	12,532 4 2 28,812 1 2 39,328 14 0 10,949 1 11 202 0 0
... 1,800 0 0 521 3 2 425 5 7	... 1,200 0 0 911 7 5 577 8 2	... 2,028 11 4 513 14 2 437 10 3	... 1,540 5 2 566 0 11 536 12 5	2,400 0 0 8,064 8 3 3,384 7 2 3,367 4 3
57 12 2 157 2 9 255 0 0 ... 120 13 0 133 8 8	101 2 3 102 0 0 240 0 0 ... 171 4 0 288 13 0	62 13 0 115 8 0 240 0 0 ... 185 0 0 167 8 4	124 1 6 103 8 0 108 0 0 ... 152 1 6 247 1 2	430 9 2 757 2 9 1,383 0 0 ... 871 1 0 1,130 10 5
21,608 15 6	14,051 10 1	14,947 8 11	17,147 11 8	1,13,613 0 3
81,149 2 2	79,089 15 5	82,527 12 6	1,49,632 2 6	5,17,702 15 4

of Forests, Sind Circle, under
Code.

GODREZJI D. PADAMJI,
For Accountant General.

Dr.

To	Cash balance		77 11 5
"	VIII. Assessed Taxes—Income Tax'		1,234 13 2
"	IX. Forests		6,85,782 2 0
"	XXII. Receipts in aid of Superannuation, &c., subscription to the Military Fund		514 0 0
"	Revenue Deposits, Forests		1,955 14 2
"	Advances Repayable—		
	Advances Recoverable, Forests		1,60,086 11 9
"	Cash Recoveries		315 14 5
"	Cheques and Bills—		
	Forest Cheques		5,29,557 11 7
"	Forest Remittances—		
	Inter-Divisional Transfers		59,881 3 11
"	Account between Bombay and Public Work Department ordinary Branches, Bombay IV Items adjustable by Public Works Department.		55 0 0
	Total Rs.....		14,19,461 2 5

No.

No.

Bombay
Accountant General's Office,
Forest Department. } Forwarded to the Conservator of Forests,

No. 59.

BOMBAY, SIND CIRCLE.

for the year 1886-87.

Cr.

By	I. Refunds and drawbacks—			
	Refunds Divided Heads—			
	Forests		689 15 7	
11	Forests... ..		5,17,702 15 4	
19	Law and Justice—			
	Jails—			
	District Jails—			
	Contingencies		468 11 7	
21	Marine—			
	Salaries and allowances of Officers—			
	Steamer “Jhelum” and “Flat Multan”—			
	Contingencies		2,824 9 5	
26	Scientific and other Minor Departments—			
	Botanical and other Public gardens		225 0 0	
	Revenue Deposits—			
	Forests		1,896 9 2	
	Advances Repayable—			
	Advances Recoverable, Forests		1,57,226 11 1	
	Cash Recoveries		315 14 5	
	Cheques and Bills—			
	Forest Cheques		11,910 10 0	
	Forest Remittances—			
	Remittances of Treasuries	2,46,424 13 3		
	Inter-Divisional Transfers	39,801 11 5		
			2,86,226 8 8	
	Account between Bombay and Military, Bengal—			
	IV. Items adjustable by Military		22,213 2 9	
	Account between Bombay and Public Works (ordinary branches) Bombay—			
	IV. Items adjustable by Public Works Department—			
	Inter-Departmental cheques		969 12 8	
	Account between Bombay and Public Works Department (Railway Branches)—			
	IV. Items adjustable by Public Works Department, North-Western Railway		4,16,626 6 10	
	Cash Balance		214 9 11	
	Total Rs		14,19,461 2 5	

F
11747. dated 9th August 1887.

GODREZJI. D. PADAMJI,
For Accountant General.

Sind Circle, under Section 238 of the Forest Code.

ANNUAL

FOREST DEPARTMENT,

Revenue received and Outstandings

Division.	Particulars.	Outstandings at commence- ment of year.	Value of Sales and other Revenue during the year.
Sukkur.....	I. Timber and other produce removed from the Forests by Government agency—		
	(a) Timber .....	.....	12,243 14 3
	(b) Firewood	54 0 0	1,71,578 12 10
	(c) Grass and other minor pro- duce .....	.....	356 1 5
	II. Timber and other produce removed from the Forests by consumers or purchasers—		
	(a) Timber .....	.....	2,517 12 11
	(b) Firewood and charcoal.....	.....	10,948 10 0
	(d) Grazing and fodder grass ...	.....	11,740 13 6
	(e) Other minor produce.....	.....	1,090 13 6
	III. Confiscated drift and waif wood .....	.....	105 10 3
	Total.....	54 0 0	2,10,582 8 8
Jacobabad	I. Timber and other produce removed from the Forests by Government agency—		
	(a) Timber .....	.....	4,057 5 1
	(b) Firewood and charcoal.....	.....	81,991 11 8
	(c) Grass and other minor produce.....	.....	.....
	II. Timber and other produce removed from the Forests by consumers or purchasers—		
	(a) Timber .....	.....	1,723 0 5
	(b) Firewood and charcoal .....	.....	14,242 7 7
	(d) Grazing and fodder grass ...	.....	2,206 8 0
	(e) Other minor produce.....	.....	202 11 0
	III. Confiscated drift and waif wood—	.....	19 4 0
	Total.....	.....	1,04,442 15 9

Hyderabad,
10th September 1887.

}

12,243 14 3	12,243 14 3	.....
1,71,632 12 10	1,71,632 12 10	.....
356 1 5	351 3 5	4 14 0
2,517 12 11	2,517 12 11	.....
10,948 10 0	10,948 10 0	.....
11,740 13 6	11,740 13 6	.....
1,090 13 6	1,090 13 6	.....
105 10 3	105 10 3	.....
2,10,636 8 8	2,10,631 10 8	4 14 0
4,057 5 1	4,057 5 1	.....
81,991 11 8	81,991 11 8	.....
.....		
1,723 0 5	1,723 0 5	.....
14,242 7 7	14,242 7 7	.....
2,206 8 0	2,206 8 0	.....
202 11 0	202 11 0	.....
19 4 0	19 4 0	.....
1,04,442 15 9	1,04,442 15 9	

The outstandings under
V. C. at the end of the year
amount to Rs. 139-12-11.

Hyderabad	I. Timber and other produce removed from the Forests by Government agency—		
	(a) Timber	876 0 0	33,190 14 11
	(b) Firewood and charcoal	990 0 0	87,413 5 8
	(c) Grass and other minor produce	260 10 10	408 2 5
	II. Timber and other produce removed from the Forests by consumers or purchasers—		
	(a) Timber .....	.....	526 3 3
	(b) Firewood and charcoal .....	.....	2,366 15 1
	(d) Grazing and fodder grass ...	.....	13,610 12 0
	(e) Other minor produce	250 0 0	7,594 14 9
	III. Confiscated drift and waif wood—	.....	1 0 0
	Total.....	2,376 10 10	1,45,112 4 1
Jerruk	I. Timber and other produce removed from the Forests by Government agency—		
	(a) Timber	1,041 4 0	17,251 10 2
	(b) Firewood and charcoal	41 8 0	70,008 7 3
	(c) Grass and other minor produce .....	.....	6 13 0
	II. Timber and other produce removed from the Forests by consumers or purchasers—		
	(a) Timber	49 8 3	764 15 3
	(b) Firewood and charcoal .....	.....	363 9 11
	(d) Grazing and fodder grass ...	3 4 0	10,603 12 0
	(e) Other minor produce .....	.....	3,128 10 5
	Total.....	1,135 8 3	1,02,127 14 0

34,066 14 11	34,066 14 11	.....	The outstandings under V. C. at the end of the year to amount Rs. 15-12-9.
88,403 5 8	87,098 5 8	1,305 0 0	
668 13 3	668 13 3	.....	
526 3 3	526 3 3	.....	
2,366 15 1	2,366 15 1	.....	
13,610 12 0	13,610 12 0	.....	
7,844 14 9	7,844 14 9	.....	
1 0 0	1 0 0	.....	
1,47,488 14 11	1,46,183 14 11	1,305 0 0	
18,292 14 2	17,251 10 2	1,041 4 0	
70,049 15 3	65,448 0 11	4,601 14 4	
6 13 0	6 13 0	.....	
814 7 6	589 7 6	225 0 0	
363 9 11	343 9 11	20 0 0	
10,607 0 0	10,603 12 0	3 4 0	
3,128 10 5	3,128 10 5	.....	
1,03,263 6 3	97,371 15 11	5,891 6 4	

Naushahro	I. Timber and other produce removed from the Forests by Government Agency—		
	(a) Timber .....	.....	2047 9 0
	(b) Firewood and charcoal .....	.....	85,726 4 9
	(c) Grass and other minor produce .....	.....	16 8 6
	II. Timber and other produce removed from the Forests by consumers or purchasers—		
	(a) Timber .....	.....	405 7 5
	(b) Firewood and charcoal .....	.....	2,775 14 0
	(d) Grazing and fodder grass ...	.....	7,705 9 0
	(e) Other minor produce.....	.....	2,400 6 11
	III. Confiscated drift and waif wood—	.....	4 12 0
	Total.....	.....	1,01,082 7 7
Total Sind Circle	I. Timber and other produce removed from the Forests by Government agency—		
	(a) Timber.....	1,917 4 0	68,791 5 5
	(b) Firewood and charcoal	1,085 8 0	4,96,718 10 2
	(c) Grass and other minor produce.....	260 10 10	787 9 4
	II. Timber and other produce removed from the Forests by consumers or purchasers—		
	(a) Timber	49 8 3	5,937 7 3
	(b) Firewood and charcoal .....	.....	30,697 8 7
	(d) Grazing and fodder grass ...	3 4 0	45,867 6 3
	(e) Other minor produce.....	250 0 0	14,417 8 7
	III. Confiscated drift & waif wood.	.....	130 10 3
	Total.....	3,566 3 1	6,63,348 1 10

FORM No. 60.

BOMBAY, SIND CIRCLE.

on account of Revenue during 1886-87.

Total.	Amount realized during year.	Balance due to the Department at end of year.	Remarks.
2,047 9 0	2,047 9 0	.....	
85,726 4 9	84,221 8 9	1,504 12 0	
16 8 6	16 8 6	.....	
405 7 5	405 7 5	.....	
2,775 14 0	2,775 14 0	.....	
7,705 9 0	7,705 9 0	.....	
2,400 6 11	2,400 6 11	.....	
4 12 0	4 12 0	.....	
1,01,082 7 7	99,577 11 7	1,504 12 0	
70,708 9 5	69,667 5 5	1,041 4 0	The outstandings under V. C. at the end of the year amount to Rs. 155-9-8.....
4,97,804 2 2	4,90,392 7 10	7,411 10 4	
1,048 4 2	1,043 6 2	4 14 0	
5,986 15 6	5,761 15 6	225 0 0	
30,697 8 7	30,677 8 7	20 0 0	
45,870 10 3	45,867 6 3	3 4 0	
14,667 8 7	14,667 8 7	.....	
130 10 3	130 10 3	.....	
6,66,914 4 11	6,58,208 4 7	8,706 0 4	

J. G. MACRAE, Lieut-Colonel,

Conservator of Forests, Sind Circle.

FORM No. 61.

FOREST DEPARTMENT, BOMBAY, SIND CIRCLE.

Divisions.	Department Debtor.			Department Creditor.			Balance due.		Remarks.
	At commence- ment of year.	Recoveries in cash and value of supplies and work done during year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (outstandings.)	By Department (Liabilities.)	
CONTRACTORS.									
Jerruck		13,551 15 3	13,551 15 3	2,001 1 2	15,325 14 1	17,326 15 3	3,775 0 0	.....	
Hyderabad		1,926 5 3	1,926 5 3	.....	3,426 5 3	3,426 5 3	1,500 0 0	.....	
Naushahro		16,736 12 0	16,736 12 0	.....	16,736 12 0	16,736 12 0	.....	.....	
Jacobabad		5,300 0 0	5,300 0 0	.....	5,300 0 0	5,300 0 0	.....	.....	
Sukkur.....		27,274 14 9	27,274 14 9	7,793 5 7	20,533 14 4	28,327 3 11	1,052 5 2	.....	
Total Contractors...		64,780 15 3	64,789 15 3	9,794 6 9	61,322 13 8	71,117 4 5	6,327 5 2	.....	
DISBURSERS.									
Jerruck.....		25,043 5 11	25,043 5 11	447 4 0	24,750 9 11	25,197 13 11	154 8 0	.....	* Owing to the aboli- tion of the Jacob- abad Division from 1887-88 this balance will be accounted for in Sukkur Divi- sion.
Hyderabad		22,566 3 6	22,566 3 6	42 0 0	22,759 7 4	22,801 7 4	235 3 10	.....	
Naushahro		7,653 0 7	7,653 0 7	.....	7,653 0 7	7,653 0 7	.....	.....	
Jacobabad		12,162 3 1	12,162 3 1	549 13 10	11,908 3 0	12,458 0 10	295 13 9	*	
Sukkur.....		27,871 15 5	27,871 15 5	916 5 8	28,832 8 7	29,148 13 10	1,276 14 5	.....	
Total Disbursers...		95,296 12 6	95,296 12 6	1,355 7 1	95,903 13 5	97,259 4 6	1,962 8 0	.....	
Grand Total...		1,60,086 11 9	1,60,086 11 9	11,149 13 10	1,57,226 11 1	1,68,376 8 11	8,289 13 2	.....	

No. ^F 11742

Forwarded to the Conservator of Forests, Sind Circle, under Section 238 of the Forest Code.

Office of Accountant General,
Bombay, 9th August 1887.

GODREZJI D. PADAMJI.

For Accountant General.

ANNUAL FORM No. 62.

FOREST DEPARTMENT, SIND CIRCLE.

Financial results of the year 1886-87.

DIVISION.	TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY.		OTHER REVENUE.		FORMATION, PROTECTION AND IMPROVEMENT OF FORESTS.	TOTAL.		REMARKS.
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Sukkur.....	1,84,228	1,36,100	36,027	7,951	12,268	2,20,235	1,56,319	
Jacobabad	86,049	69,087	18,944	5,761	7,430	1,04,993	82,278	
Naushahro	86,286	71,234	21,068	6,082	8,471	1,07,354	85,787	
Hyderabad	1,21,834	85,198	30,056	10,308	13,589	1,51,890	1,09,095	
Jerruck.....	82,707	62,215	18,583	8,272	13,737	1,01,290	84,224	
Total.....	5,61,104	4,23,834	1,24,678	38,374	55,495	6,85,782	5,17,703	

Hyderabad,

J. G. MacRAE, Lieut.-Colonel,
Conservator of Forests, Sind Circle.

10th September 1887.

Statement showing the Progress of Forest Demarcation and Settlement Work in the Sind Circle for 1886-87.

Class of Forests.	At the commencement of the year—Areas under Section 34 in which private rights have not been enquired into, settled and recorded.		AREAS SETTLED DURING THE YEAR UNDER		Area of Reserved Forests alienated under Section 26.	Area of Protected Forests disforested under Government orders.	At the end of the year—Areas under Section 34 in which private rights have not been enquired into, settled and recorded.
	Chapter II of the Act.		Chapter IV of the Act.				
	Square Miles.	Square Miles.	Square Miles.	Square Miles.	Square Miles.	Square Miles.	Square Miles.
Reserved Forests		24	.....	.....	.....	.....	.....
Protected Forests							

J. G. McRAE, Lieut.-Colonel,
Conservator of Forests, Sind Circle.

*Forest Administration Reports of the Northern, Southern and Sind
Circles, 1886-87.*

No. 2232 OF 1888.

REVENUE DEPARTMENT.

Bombay Castle, 12th April 1888.

Letter from the Conservator of Forests, N. C., No. 3972, dated 25th October 1887—Submitting the Forest Administration Report of the Northern Circle for the year 1886-87, with its subsidiary statements.

Memorandum from the Commissioner, N. D.,
No. 3813, dated 13th December 1887. } Submitting their remarks on the report of the
Letter from the Commissioner, C.D., No. ^{R.}₁₀₉, } Northern Circle.
dated 10th January 1888.

Letter from the Conservator of Forests, S.C., No. 3135, dated 18th October 1887—Submitting the Forest Administration Report of the Southern Circle for the year 1886-87, together with its subsidiary statements.

Memorandum from the Commissioner, S. D., No. 58, dated 7th January 1888—Submitting his remarks on the report of the Southern Circle.

Letter from the Conservator of Forests, Sind Circle, No. 741, dated 10th September 1887—Submitting the Forest Administration Report of the Sind Circle for the year 1886-87, with its subsidiary statements.

Memorandum from the Commissioner in Sind, No. 5396, dated 18th October 1887—Submitting his remarks on the report of the Sind Circle.

Letter from the Conservator of Forests, Sind Circle, No. 1292, dated 6th January 1888. } Submitting, with reference to paragraph 2 of
Letter from the Conservator of Forests, S. C., No. 4364, dated 17th January 1888. } Government Resolution No. 8738, dated 24th
Letter from the Conservator of Forests, N. C., No. 6248, dated 1st March 1888. } December 1887, statements showing the
progress of forest demarcation and settle-
ment work in the form prescribed by the
Government of India for embodiment in the
Forest Administration Report for the year
1886-87.

RESOLUTION.—By far the most important feature in the forest history of the year 1886-87 was the decrease of net revenue by nearly 4½ lakhs as shown

	Receipts.		Expenditure.		Net Revenue.	
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Northern Circle ..	10,37,297	9,13,101	6,63,640	6,37,865	3,73,657	2,25,236
Southern do. ..	17,92,114	14,33,793	7,22,586	6,94,614	10,69,528	7,39,179
Sind do. ..	5,36,874	6,85,782	4,02,660	5,17,703	1,34,214	1,68,079
Total ..	33,66,285	30,32,676	17,88,886	19,00,182	15,77,399	11,32,494

in paragraph 67 of his report, hears with satisfaction that the revenue, both gross and net, of this Circle was the largest on record. In the Southern Circle also, though attention must be called to the somewhat startling results of departmental operations in Ratnágiri and to a smaller extent in Bijápúr, shown in Form 62, the fact that the receipts exceeded those of all past years except 1885-86, when the enormous demand for sleepers for the Southern Marátha Railway then under construction swelled them abnormally, is matter for satisfaction, as is also the increasing demand for fuel for that railway.

In spite of these satisfactory features in the working of the Department during 1886-87, His Excellency the Governor in Council cannot but regard with grave anxiety the subject of forest finances in their present relation to the Provincial resources of this Government. It is plain that under the present system the large gross receipts from Sind forests cannot, even if maintained or increased,

add appreciably to the general net revenue. The receipts in the Southern Circle are closely associated with demand for railway construction and working and must, unless otherwise developed, be dependent in great measure upon a demand which in its nature is uncertain; and meantime over the very large area of the Northern Circle causes beyond departmental control or prevision have operated to reduce the receipts from wood and other forest produce. The experience of the season which has passed since 1886-87 carries the same warning, the forest accounts of 1887-88 being estimated to show a deficit on the contract figures of Rs. 23,000.

2. In three of the eleven divisions of the Northern Circle receipts failed to balance expenditure, and in eight the net revenue was less than in the previous year. The main causes assigned are the stagnation of the timber market in Thána, an absence of demand for timber from the forests of the Surat Division, and a fall in the price of myrobalans.

The revenue from grazing fees was, it is observed, higher for the whole Circle than in the previous year, though in Poona, and to a still greater extent in Sholapur, an important decrease is reported, the cause of which in the latter is not explained, but in the former appears to have been to some extent the evasion by professional graziers of the rule requiring them to pay fees when pasturing their cattle in the areas in which "village cattle" are allowed to graze free of charge.

3. The forest area at the beginning and end of the year under review is shown in the following table :—

	AREA ON 1ST APRIL 1886 IN SQUARE MILES.		ADDED.		EXCLUDED.		AREA ON 31ST MARCH 1887.	
	Re- served.	Pro- tected.	Re- served.	Pro- tected.	Re- served.	Pro- tected.	Re- served.	Pro- tected.
	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.
Northern Circle ...	7,016	1,013	251	119	36	52	7,231	1,080
Southern Circle ...	1,816	3,414	6	4	...	6	1,822	3,412
Sind Circle ...	673	...	34	...	8	...	699	...
Total ...	9,505	4,427	291	123	44	58	9,752	4,492

4. The selection of land for forests was practically completed in Sind and was pushed on rapidly in most of the divisions of the other two Circles. Numerous demarcation reports were submitted to Government for sanction and as a consequence considerable areas, not shown in the above table, were provisionally notified as Reserved Forests under Section 4 of the Forest Act. The final additions to the Reserved Forest area were important in only a few divisions of the Northern Circle, in which they were due to the completion of the settlement inquiries made in respect of lands previously provisionally notified by Government under Section 4. In the Panch Maháls division alone, in which no Protected Forest had previously existed, was the formation of any considerable area of this class of State property sanctioned, and in this case the expediency of encouraging cultivation in a fertile but backward district rendered desirable a departure from the principle usually acted upon of applying to State forest property the final method of settlement prescribed by the Forest Act for Reserved Forests only.

Mr. Shuttleworth suggests a doubt as to whether the demarcation schemes already sanctioned by Government, more especially those for the subdivisions included in the catchment area of Bombay Harbour, provide sufficiently for the storage of the rainfall, but he should be aware that Government have not sanctioned these schemes without weighing carefully all the arguments on the subject which he has on each occasion brought forward, and considering, on the other hand, the important local interests, conflicting with his alternative and ideal schemes, in thickly populated districts.

5. The Conservators of the Northern and Southern Circles—in Sind settlement is practically completed—in reporting on the work of the various

Forest Settlement and Demarcation Officers have not kept "Settlement" distinct from "Demarcation" work, and though the additions made during the year—in all cases by notification under Section 19 of the Forest Act—to the Reserved Forest area give, no doubt, some idea of the area previously notified under Section 4, in respect of which all the requisite settlement formalities prescribed in the following sections were completed, it is desirable that exact figures showing the progress made in respect of both Reserved and Protected Forests should be given in future reports. As regards the settlement of areas notified under Section 34 the Conservators have separately complied, since the submission of their printed reports, with the instructions contained in Government Resolution No. 8738, dated 24th December 1887, and have submitted statements of which the following is a summary:—

Class of Forests.	At the commencement of the year—Areas under Section 34, in which private rights have not been enquired into, settled, and recorded.	AREAS SETTLED DURING THE YEAR UNDER		Area of Reserved Forests alienated under Section 26.	Area of Protected Forests disforested under Government orders.	At the end of the year—Areas under Section 34, in which private rights have not been enquired into, settled and recorded.
		Ch. II of the Act.	Ch. IV of the Act.			
	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.
Northern Circle ... { Reserved ...	1,768	68	...	8	...	1,692
Protected ...	621	...	...	...	1	620
Southern Circle ... { Reserved ...	965	69	...	...	...	896
Protected ...	2,667	...	25	...	7	2,635
Sind Circle ... Reserved ...	.....	(24)	...	...	...	...
Total ... { Reserved ...	2,733	137	...	8	...	2,588
Protected ...	3,288	...	25	...	8	3,255

The figures given by the Conservator of the Sind Circle are obviously incorrect, for if no areas (see column 1) remained unsettled at the beginning of the year, none could be settled during it. Colonel MacRae has apparently not confined, as he should have done, his information to the case of areas previously notified under Section 34. The fact that in the Northern and Southern Circles Poona and Kolába respectively were the only districts in which any settlement at all of such areas was effected, should be further reported on by the Conservators of those Circles. Government have repeatedly urged the necessity for speedily completing the settlement of these lands. Mr. Shuttleworth should have explained why he omitted the two Khándesh Divisions, Násik, Sátára and Sholápur from his statement.

6. The expenditure incurred during the year on the creation and constitution of forests, including the salaries and allowances of Forest Settlement Officers, was as follows:—

	Rs.
Northern Circle ...	1,36,767
Southern Circle ...	54,225
Sind Circle ...	2,562
Total ...	1,93,554

7. The newly established working plans branch of the Forest Department was busily employed during the year in the Thána District, but the results of the season's work show that progress in the preparation of very elaborate schemes for working the forests will be far too slow to justify their occupying for the present the exclusive or even any large share of the attention of that branch. The circumstances of this district necessitate the rapid formation and carrying out of somewhat rough schemes for dealing with the whole of the extensive area in charge of the Forest Department, and the Governor in Council approves generally of the opinions expressed on this subject and the proposals made by Mr. Shuttleworth in paragraphs 49 and 52 of his report. In the Southern Circle though no regular working plans could be prepared the investigations

made in some of the Belgaum Forests adjacent to the Southern Marátha Railway, with a view to preparing a plan for furnishing a sustained supply of fuel to that railway, were of considerable importance.

The Conservator of the Sind Circle reports the successful working of the Laikpur forest by an arrangement with the zamíndár which has the peculiar feature of combining alternations of cultivation with forest in such a manner that the expense of cutting and delivery of wood actually falls upon the profits of cultivation. This experiment is particularly valuable in Sind where the cost of production by departmental agency falls so heavily upon forest finance; its apparent success is, no doubt, due to the very rapid reproduction of wood fit for fuel in watered land in Sind.

8. The subject of forest surveys is intimately connected with that of working plans, which are necessarily based on them. The results of the surveys conducted during the year by the Government of India survey parties in the Thána and Belgaum forests cannot be considered as satisfactory either financially or, looking to the slow progress made, from an administrative point of view, and the Government of India have already been addressed on the subject of a revised scheme for surveying the forests in future. No adequate return for the heavy cost of the present survey can, it is feared, be expected, and it seems clear that in Thána, at all events, the working plans branch, for whose use the maps are mainly required, will, if the scheme recommended by Mr. Shuttleworth is adopted, be compelled to dispense with them altogether until a large portion of its work is completed. For reasons which have been sufficiently stated by Colonel MacRae little progress could be made with the departmental survey of the forests of the Sind Circle.

9. The result of prosecutions under the Forest Act was more satisfactory than in the previous year in the Southern and Sind Circles, but slightly less so in the Northern, where, however, the result may be attributed almost exclusively to the remarkable failure of prosecutions in Sátára, where the non-success of 71 out of 87 seems to show that cases were sent up for trial without sufficient preliminary inquiry. The attention of the District Magistrate should be given to this matter and report made to the Commissioner as to the cause of such an unsatisfactory result. The Conservator should address the District Magistrates on the point raised at the close of his paragraph 78 regarding procedure preliminary to the trial of forest cases in regard to which it would appear that the provisions of the law are not properly complied with.

An increase in the number of compounded cases is reported by the Conservators of the Northern and Sind Circles. Mr. Shuttleworth's remarks in paragraph 78 of his report on the system of compounding offences appear to be sound.

10. As regards the general protection of the forests nothing that calls for special notice is reported. The question of amending Section 41 of the Forest Act, with a view mainly to the circumstances of forest administration in Thána, is still under consideration.

11. The Governor in Council has learnt with regret the prevalence of fires in the Upper Sind forests during the year under review, and he also regrets to hear that the protection of those forests from fire is considered by Colonel MacRae to be hopeless. That officer again urges the expediency of firing the reed jungles. The explanation he has now given of the features of his scheme places its advantages in a much clearer light than that previously submitted by him, and as the scheme appears to provide for the systematic destruction of blocks of worthless jungle, which cannot ordinarily improve and is liable at any time to destruction by fire, as the only means of preventing fires spreading into valuable forest, and is, therefore, somewhat akin to, though more extensive than, the ordinary "fire path" system of protection, the Governor in Council believes that the Government of India can have no objection to an experimental trial in selected areas, which is accordingly sanctioned.

12. The relations between the protective staff and the people appear to have been generally satisfactory, and the Governor in Council has already, in

reviewing the Administration Report of the Collector of Thana for 1886-87, had occasion to notice the decrease of friction in that district.

13. - The special free grants of timber made during the year under review were as usual of little importance, but the Conservator, N. C., has in paragraph 139 of his report pointed out that the free grants of various kinds of produce made in the form of "privileges" exceed in value the total forest revenue of his Circle. On this very difficult subject the Governor in Council does not consider that any remarks are here necessary, as it will be dealt with elsewhere. The Governor in Council has always been careful, while formally conceding liberal privileges on the completion of a forest settlement to communities which are reported to have enjoyed them, though as a matter of favour and not of right, for many years past, to make it clearly understood that such privileges are intended to be exercised as of favour only and are subject to withdrawal at any time.

14. - For reasons stated in the Conservators' reports little expenditure on "communications" was incurred during the year under review. Government have, however, in Resolution No. 8738 of 24th December 1887, informed the Commissioners that in the case of any road-construction contemplated by the Local Boards, which is likely to be of service to the Government forests, some assistance from Government may be looked for.

15. The Conservator, N. C., should be requested to submit, after consultation with the other two Conservators, a detailed scheme for carrying out the proposal made in paragraph 157 of his report. With a view to diminishing the sedentary work of officers whose principal duties must be performed inside the forests, and in order to decrease the cost of the clerical staff, it seems to the Governor in Council eminently desirable that some such scheme should be adopted.

E. LAWRENCE,

Acting Under Secretary to Government.

To

The Commissioner, N. D.,
 The Commissioner, C. D.,
 The Commissioner, S. D.,
 The Commissioner in Sind,
 All Collectors, including the Collectors and Deputy
 Commissioners in Sind,
 The Conservator of Forests, N. C.,
 The Conservator of Forests, S. C.,
 The Conservator of Forests, Sind Circle,
 The Director of Land Records and Agriculture,
 The Accountant General,
 The Judicial Department of the Secretariat,
 The Editors' Table, Bombay,
 The Editors' Table, Poona, *care of the City Magis-*
trate, Poona,
 The Editor and Proprietor, *Dhárwár Vritt*, Dhárwár
 (for his own use and for circulation to other
 Editors of newspapers in Dhárwár),
 The Government of India,
 The Secretary of State for India.

With copies of the re-
 ports.

} By letter.

